United States Court of Appeals

for the

District of Columbia Circuit

TRANSCRIPT OF RECORD

BRIEF FOR APPELLANT

169

IN THE

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA

United States Court of Appeals
for the District of Columbia
FILED NOV 17 1947
Joseph W. Stewart
CLERK

No. 9660

FORREST H. SMITH,
Appellant,

v.

LAWRENCE C. KINGSLAND, Commissioner of Patents,
Appellee.

APPEAL FROM THE JUDGMENT OF THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF COLUMBIA

W. B. MORTON,
CLARENCE M. FISHER.

New York, N. Y.,
November 12, 1947.

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IN THE

United States Court of Appeals

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No. 9660

FORREST H. SMITH,
Appellant,
v.
LAWRENCE C. KINGSLAND, Commissioner of Patents,
Appellee.

BRIEF FOR APPELLANT

Jurisdictional Statement

This is an appeal from the judgment of the lower Court (Curran, J.) dismissing appellant's complaint (Appellant's App. 9) against the Commissioner of Patents in an action under R.S. 4915 (U. S. Code Title 35, Sec. 63 as amended March 2, 1927) wherein the appellant, who had previously filed an application for patent in the U. S. Patent Office (Appellant's App. 1-8) asked for a decree directing the Commissioner of Patents to issue to appellant a patent containing certain claims (*infra* p. 2) which had been rejected by the Board of Appeals of the Patent Office. Appellee's Answer (Appellant's App. 12) contended that the claims were unpatentable to appellant on several grounds.

The lower Court, on May 28, 1947, after considering the testimony of several witnesses produced by plaintiff, entered its judgment (Appellant's App. 16) dismissing the complaint.

Findings of Fact and Conclusions of Law (Appellant's App. 13) were entered by the Court.

Appellant filed its notice of appeal to this Court on August 26, 1947 (Appellant's App. 16). This Court has jurisdiction of this appeal under the act of February 8, 1893, c. 74, 27 Stat. 435, as amended and as incorporated in the District of Columbia Code, 1940 Edition, Title 17, Sec. 101.

Statement of the Case

The Court found (Finding of Fact No. 10) that the allowance of the claims here in issue "would result in double patenting" in view of appellant's prior patent No. 2,051,348 (Appellant's App. 73), and (Finding of Fact No. 11) that the claims recite nothing "amounting to invention over" certain prior art patents.

Appellee also urged that the patentability of the claims here in issue to appellant was *res adjudicata* because of the procedure in an earlier application which was ultimately abandoned. The lower Court in its Conclusions of Law (No. 1) ruled adversely to appellee on this issue.

The invention disclosed in the application before the Court is a drying house for curing tobacco.

The claims in issue read as follows:

> "1. In a drying house for curing tobacco, means for maintaining said house throughout substantially its entire interior at a temperature to cure bright tobacco supported therein, said means comprising a plurality of small separate low-intensity oil-burning heaters arranged about the floor of said house in a manner to provide a substantially uniform temperature

> throughout the cross sectional area of said house, deflecting baffles overlying said heaters and arranged to deflect the products of combustion laterally into the spaces surrounding said heaters, means for supplying fuel to said heaters, and means for independently regulating the rate of combustion of said separate heaters.
>
> 2. The method of curing tobacco in a drying house which consists in burning at a plurality of locations throughout the floor of the house a liquid fuel to thereby generate a number of columns of heated products of combustion, directing said products of combustion laterally into the spaces surrounding said locations in such manner as to produce a mixture of said products of combustion with the air of the drying house, which mixture is of substantially uniform temperature throughout the cross sectional area of said house, said individual heaters being provided in sufficient number to heat substantially the entire interior of said house to a temperature sufficient to cure bright tobacco, but at no point above the mixing zone high enough to injure said tobacco.
>
> 3. In a drying house for curing bright tobacco, a plurality of small separate low-intensity oil-burning heaters arranged about the floor of said house in a manner to provide a substantially uniform temperature throughout the cross sectional area of said house, each said heater comprising a plurality of burners and deflecting baffles overlying said burners and arranged to deflect the products of combustion laterally into the spaces surrounding said heaters, means outside said house for supplying fuel to said heaters, connections between said heaters, and means for independently regulating the rate of combustion of said separate heaters."

The application drawings (Appellant's App. 8a, 8b) disclose apparatus for carrying the invention into effect. The essential elements of the invention are a plurality of low intensity oil burners arranged in groups of three or more and distributed about the floor of the tobacco barn underneath the hanging tobacco to supply the heated gases for curing the tobacco. Each group of burners is enclosed in a housing which serves the double purpose of spreading the heated gases laterally throughout the space beneath the hanging tobacco so that the heat will be uniformly distributed throughout the entire barn and effecting a dilution of the hot products of combustion with air drawn off of the floor of the barn to thereby reduce the temperature of the gases to an extent such that there will be no overheating of the tobacco. The housing also shields the tobacco supported immediately above or near the individual burners from the direct radiant heat of the flame. The several housings each containing a group of burners are individually connected to a common feed pipe by means of flexible hose so that the individual housings may be distributed about the barn floor in a manner to insure a uniform distribution of heat throughout the entire barn.

The claims define a pioneer invention, namely, the first successful use of open flame oil burners for curing so-called bright tobacco.

The record shows that prior to the exploitation of the invention forming the subject-matter of applicant's prior patent No. 2,051,348 (Appellant's App. 73) it had been the universal practice throughout the entire bright tobacco belt of this country to cure the tobacco by what is known as the flue curing method. A dozen or more witnesses, experienced tobacco growers, from various points throughout the bright tobacco district of North Carolina and Virginia, testified that prior to the installation by the appellant here of his oil burning tobacco curers, they knew of no instance where tobacco was cured by any method other than the original flue curing system which had been in use, unchanged, for upwards of one hundred years. Mr. Matthews of the Virginia Agricultural Experiment Station in charge of the tobacco work of that institution, also testified to the same effect (Appellant's App. 24).

In the old flue curing system the so-called "flues" consisting of large sheet metal pipes, were installed across the floor of the tobacco barn or drying house. On one side of the barn the flues were connected to the furnace—either a coal—or a wood-burning furnace—and on the other side of the barn with a smoke stack so that the heated gases from the furnace passed through the sheet metal flues across the barn floor to the smoke stack. As testified to by all the various witnesses, it is necessary in order to obtain good results with the old flue curing system, to give constant night and day attention to the fires.

The quality of the tobacco is very much affected by the skill practiced in its curing. The curing requires four different temperature stages (Appellant's App. 20, 21). After the green tobacco is hung in the barn the temperature of the air throughout the barn must be brought to the desired degree and maintained constant at that degree until a certain change takes place in the color and texture of the tobacco. The temperature of the barn must then be rapidly changed to another fixed value and carefully maintained at that temperature for a predetermined period or until a predetermined result is obtained. Then the temperature is again raised and the curing continued at the elevated temperature which also must be kept constant until the final curing step, when the temperature must again be raised and maintained until the leaf is of the desired color and texture and the water content is reduced to the desired fraction.

The temperature of the barn must not only be kept constant for predetermined periods, but it must be kept uniform throughout the barn or the tobacco in the hotter portion of the barn will attain the desired condition before the tobacco in the other parts of the barn, making it impossible to secure optimum results at any point in the barn.

Mr. Matthews, the tobacco expert from the Virginia Agricultural Experiment Station stated that he ran comparative tests with recording thermometers in a barn equipped for the old flue system of curing and a barn equipped with the applicant's oil-burning equipment, and that in the hands of a skilled man of long experience with a wood-burning flue system variations in temperature of from 10-15% were unavoidable, whereas with the oil-burning system a smooth, even temperature could easily be obtained (Appellant's App. 23, 30).

We have not quoted from the testimony of the various witnesses, but instead have included it in its entirety in the appendix. A review of this brief testimony gives a good picture of the practical aspects of curing tobacco with the old and new systems.

The Appellant's Invention

Invention, in the sense of the patent law, consists of a conception that a result not obvious on the basis of prior knowledge or perhaps, as here, contrary to what would probably be expected, can be accomplished, followed by the development of a practical means for attaining the new result.

Eck v. *Kutz,* 132 Fed. 758, Sept. 23, 1904 Circuit Court, E. D. Pennsylvania.

> "Inventive discovery, * * * involves the intelligent apprehension of relations not before recognized by others, although actually existing, followed by the conception of how they can be practically utilized" (p. 779).

The distinction between invention and the expected skill of the calling is that invention includes a "seeing beyond" the vision of the worker in the art—a realization of properties not before utilized, although existing and perhaps close at hand. The Smith conception was not merely that oil burners could be better regulated, and therefor more uniform temperature secured with oil-burning apparatus than with coal- or wood-burning apparatus. The desirability of using oil was obvious to anyone, but the problem remained unsolved because no one realized how oil could be used at a cost comparable with wood and coal. Obviously oil burners could be substituted in the old wood-burning furnaces of flue-curing systems, but such furnaces are too wasteful of heat. Oil, to the farmer, on the basis of heat units, costs many times its equivalent in wood. What Smith realized, and the art did not realize was that the direct heat in the form of combustion gases from open oil flames burning in the barn could be successfully employed for curing bright tobacco by the use of *low intensity* burners distributed around the barn floor, each with provisions for diluting the gases to reduce the combustion temperature* to a point where the immediately adjacent tobacco would not be overheated.

By coupling the burners to a common oil supply he secured the advantage of easy regulation of the temperature throughout the barn, while by regulating the individual burners he could attain the necessary distribution of the heat to maintain uniform temperatures throught the barn regardless of variations in outside temperatures, wind direction, etc. In the light of Smith's disclosure the whole problem seems simple, but the fact nevertheless remains that despite the long existing need—the obvious desirability of a heating system which could be closely regulated—the art continued to use without exception the old flue system with the outside furnace.

The appellant's invention, by the undisputed evidence of all the witnesses, marks a real advance in the art of curing tobacco. The cost of maintaining constant day and night attention to the fires to maintain the exact temperature conditions at the successive stages for the proper curing of the tobacco is almost wholly eliminated (Appellant's App. 39, 43, 49, 52, 58, 60, 63, 68). The fuel cost is greatly reduced (Appellant's App. 24) and the quality of the tobacco is significantly improved (Appellant's App. 39, 42, 46, 48, 51, 55, 57, 60, 62, 65, 66, 71).

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* 3000° F.

Unless, therefore, there is some statutory bar to the allowance of the claims sought by this proceedings, the patent should be granted.

Rules of Law Involved

The only rules of law involved are (1) the well established rule that an application who has invented two separate species of a generic invention may have two valid patents provided generic claims to both species are included in only one patent, which patent may be either the first or the second to issue; and (2) where a new method or apparatus solves a long-existing problem to the great advantage of the art, claims which define the novel features of the new apparatus or process are patentable.

Statement of Points

The lower Court in its Findings and Conclusions holds the claims in issue unpatentable on two grounds, *viz.,* (1) "double patenting" and (2) that the claims define nothing "amounting to invention" over three prior patents granted, respectively, to Mims, Brock and Reynolds. In its Conclusions of Law the lower Court specifically ruled against the Patent Office on the alleged ground of rejection that the decision on the patentability of the claims was *res adjudicata.*

It is appellant's position:

I. There is no double patenting because the claims here presented are not directed to the same invention as the claims of appellant's prior patent.

II. The claims in issue define a patentable invention over the disclosure of the prior art patents to Mims, Brock and Reynolds.

SUMMARY OF ARGUMENT

Point I

The claims of the Smith patent No. 2,051,348 are all directed to structural details of the specific form of apparatus disclosed in the drawings of that patent and none of the claims are of a scope to include the apparatus disclosed in the drawings and specifications of the application here at bar. There are no method claims in the granted patent. The claims here in issue involve generic apparatus claims to both species of apparatus and a method claim not limited to either species of apparatus. There is no double patenting because the claims of the granted patent are limited to a specific apparatus not disclosed in the pending application.

Point II

The claims in issue define patentable invention over the disclosures of Mims, Brock and Reynolds none of which discloses the combination of elements recited in the apparatus claims or could be used to carry out the sequence of steps recited in the method claims. The need for the improvement defined in the claims in issue had existed for a great many years, but the problem was not solved and no change was made in the existing method and apparatus prior to the exploitation of the apparatus forming the subject-matter of the claims here in issue. Under the established rule of *Diamond* v. *Consolidated,* 220 U. S. 428, *Eibel* v. *Paper Co.,* 261 U. S. 45, and *Kelly* v. *Coe,* 99 F. (2d) 435, the claims define patentable subject-matter.

ARGUMENT

Double Patenting

The application here in suit was filed November 2, 1942. This application was substituted for a substantially identical application Ser. No. 221,288 filed July 26, 1938 (Pltff's. Exh. 2). This application was in turn substituted for an earlier application, namely Ser. No. 41,465, filed September 20, 1935 (Pltff's. Exh. 3) prior to the issuance of applicant's patent No. 2,051,348. These two earlier applications have not been included in the appendix because it is agreed by the parties that the apparatus described and shown in the present application is identical with the apparatus forming the subject-matter of the two prior applications. It is also agreed that the method claim here presented was first presented in the application, Exhibit 2, filed July 26, 1938.

The effective date, therefore, of the application here at bar is September 20, 1935, and it is immaterial whether or not the method claims were presented at the time of the original filing of the application, for an applicant is entitled to the date of his earliest application for all the claims that he did make or could have made on the basis of the disclosure of that application.

Chapman v. *Wintroath,* 252 U. S. 126, 137:

> "To this we must add that not only have later or divisional applications not been dealt with in a hostile spirit by the courts, but, on the contrary, designed as they are to secure the patent to the first discoverer, they have been favored to the extent that where an invention clearly disclosed in an application, as in this case, is not claimed therein but is subsequently claimed in another application, the original will be deemed a constructive reduction of the invention to practice and the later one will be given the filing date of the earlier, with all of its priority of right.

> *Smith & Griggs Manufacturing Co.* v. *Sprague,* 123 U. S. 249, 250; *Von Recklinghausen* v. *Dempster,* 34 App. D. C. 474, 476, 477."

The lower Court's ruling on double patenting is embodied in Finding No. 10, reading as follows:

> "10. The claims at bar are for the same invention as claim 2 of plaintiff's patent 2,051,348, and are unpatentable in the application at bar, because to allow said claims would result in double patenting."

Claim 2 of the applicant's prior patent, if presented in the application here at bar, would obviously have been rejected as directed to subject-matter not disclosed in the application. The claim specifically includes a screen located over the burner housing. No such screen is disclosed in the application here before the Court, and while unquestionably the claims here in issue could have been presented in the original patent and are broad enough to read on the form of the invention specifically disclosed in the granted patent as well as the modification of the invention here disclosed, it is not denied by the solicitor for the Patent Office that it is the established rule of the Patent Office that an inventor who presents two separate modifications of his invention in two separate co-pending applications may present claims of a scope to be generic to both modifications in either the first or the second patent to issue.

> *Ex Parte DeGroote and Keiser,* 59 U. S. P. Q. 36, 37, May 29, 1943:

> "The argument that the grant of the present claims would unduly extend appellants' monopoly is not persuasive, for this situation frequently arises when an applicant has one application containing generic and specific claims and a second application with claims to still another species. It frequently happens that the second application is the first to issue for the broader claims are frequently held in this Office by reason of interference proceedings, appeals, etc."

The established test of double patenting is that a patentee may not have two patents both of which contain broad claims to both forms of the invention. He is entitled to one patent which may be either the first or the second to issue, having claims generic to both forms of the invention and also specific claims to one form. He is also entitled to a second patent, which may be first to issue, with claims directed to the particular species disclosed in such patent but with *no claims* of a scope to cover both species.

The solicitor for the Patent Office before the lower Court did not contend that an applicant was not entitled to generic claims in the second patent to issue on two copending applications, but took the unique position that because the application here does not *also* contain specific claims to features disclosed *only* in the second application he is not entitled to the broader claims. This argument seems to us totally illogical. We fail to see how the patentability of the claims can be affected one way or the other by the presence in the application of other claims. It is well settled that in the consideration of patent claims each claim must be considered individually.

It is true, of course, that a patent, like other documents, must be construed, as to all its parts so as to be consistent, as far as possible, with all other parts, but we know of no instance where claims otherwise valid can be rendered invalid by the failure to present along with them some imaginary claims which have never been presented anywhere.

The question of double patenting can be, and is, determined by a comparatively simple test, namely, would the manufacture of the particular species of the invention disclosed in patent A infringe the claims of patent B, and also, would the manufacture of the article disclosed in patent B infringe the claims of patent A. Unless *both* conditions exist there is no double patenting. It is quite obvious that the manufacture of the specific apparatus forming the subject-matter of the application here at bar would not infringe the claims of the granted patent. It is well settled that an element specifically and deliberately recited in a patent claim cannot be read out of the claim in order to broaden its scope. It may be that the inclusion in the claim of the screen as an element of the combination imposed an unnecessary limitation on the claim, but the claim *is* so limited, and *as* so limited it does not cover the apparatus disclosed in the case at bar. There can therefore be no double patenting.

It is difficult to see how the defense of double patenting can be urged against the method claim here before the Court (claim 2). While a method and an apparatus for carrying out the method may be so related that claims to the method and to the apparatus will be allowed in the same patent, it is well settled that the prior grant of an apparatus patent will not bar the grant of a method claim in a subsequent application.

> *General Tire & Rubber Co.* v. *Fisk Rubber Corp.* (C. C. A. 6) 104 F. 2d 740;
> *Hartford-Empire Co.* v. *Obear-Nester Glass Co.* (C. C. A. 8), 71 F. 2d 539;
> *Ex Parte Webster* (Pat. Off. Bd. of App.), 40 U. S. P. Q. 35;
> *Ex Parte Nichols* (Pat. Off. Bd. of App.), 45 U. S. P. Q. 368.

In the last cited case the two applications were not co-pending.

It has frequently been held by the Supreme Court and by this Court that a method is a different invention from the apparatus capable of carrying it into effect.

> *Carnegie Steel Co.* v. *Cambria Iron Co.,* 185 U. S. 403;
> *Hartford-Empire Co.* v. *Coe,* 87 F. 2d 741.

There can be no double patenting of a method claim unless the earlier granted patent contains a similar *method* claim.

The Prior Art

The real question presented in the case at bar is the same question which is presented in every patent case, namely, the question of invention. In holding, as it did, that the claims presented here present nothing "amounting to invention" over the patents to Brock, Mims and Reynolds (Appellant's App. 82, 86, 92), we believe the Court construed the claims more broadly than their language permits.

In the evidence before the Court it was repeatedly brought out that the first successful application on the open flame principle for curing the tobacco was made by this applicant in the commercial exploitation of the apparatus disclosed in this application, and the lower Court apparently assumed that the claims presented here were broad enough to cover every apparatus designed to carry this principle into effect. The claims are not, however, of such breadth. Unquestionably the patents cited, namely, Mims, Brock and Reynolds, disclose apparatus for drying tobacco or other substances by means of combustion gases from an open flame oil burner. None of the patents, however, discloses the elements recited in the patent claims, and none of them discloses an apparatus which could be successfully used for the curing of tobacco. Both Mims and Reynolds disclose a single centrally located oil-burning heater for furnishing all the heat for the curing operation. The evidence is, that the Reynolds curer was tried out about twenty years ago and was a failure, that the tobacco was damaged in the curing process and had to be sold at a reduced figure (Appellant's App. 69). Moreover it is obvious that the single burner heaters of Mims and Reynolds do not anticipate the claims which definitely call for a plurality of small low-intensity heaters distributed over the barn floor and of a capacity such that each furnishes only a small fraction of the heat required for the curing operations to be carried out. The witnesses testified that some twenty or thirty individual heaters are required for one barn, the minimum of twenty being the number required for a small 16 x 16 ft. barn (Appellant's App. 19). Heating a room 16 ft. square with twenty individual oil burners seems somewhat absurd on its face, but it was nevertheless the solution of the problem of curing tobacco with oil burning equipment. Neither Mims nor Reynolds discloses this basic idea of the applicant's successful apparatus.

The Brock patent likewise fails to disclose the essential elements recited in the claims. As pointed out by Mr. Matthews, it is essential to good tobacco curing to maintain uniform temperature throughout the entire barn. Otherwise all the tobacco will not be changed from one stage to the other of the curing operation at the same time, and the tobacco will be either over-cured or under-cured (Appellant's App. 22). Means for so distributing the heat of the burners to obtain uniform temperatures throughout the entire barn are included as an essential element of the rejected claims. It takes only a brief examination of the Brock patent to see that two-thirds of the heat is discharged in a narrow path along the center line of the barn, leaving only one-third of the heat for the outer portions of the barn containing more than four-fifths of the total contents. As the heat discharged in the middle zone of the barn includes all the heat generated by the middle burner and half the heat generated by each of the two side burners, it would be impossible by any regulation of the burners to avoid this wide variation in the distribution of the heated gases. It would seem obvious that Mr. Matthews' conclusion that the Brock apparatus would not work is amply justified (Appellant's

App. 27), and it is small wonder that the witnesses, representative of the farmers in the bright tobacco section had none of them ever heard of an apparatus similar to that disclosed in the Brock patent.

The applicant's invention is not merely the idea of using the products of combustion from an open flame oil burner for curing tobacco. His invention included also, in the language of *Eck* v. *Kutz, supra,* the conception of a method and the development of an apparatus for successfully carrying that idea into effect. The prior art cited before the lower Court fails to disclose the elements of the apparatus and method recited respectively in the rejected claims.

Invention

The Supreme Court and this Court have uniformly held that the circumstances presented here constitute the strongest proof that invention, and not merely the expected skill of the calling, was required in the development of the new method and apparatus for curing tobacco.

Diamond Rubber Co. v. *Consolidated Tire Co.,* 220 U. S. 428, 434, 435:

> "Its simplicity should not blind us as to its character. Many things, and the patent law abounds in illustrations, seem obvious after they have been done, and, 'in the light of the accomplished result,' it is often a matter of wonder how they so long 'eluded the search of the discoverer and set at defiance the speculations of inventive genius.' *Pearl* v. *Ocean Mills,* 11 Off. Gaz. 2. Knowledge after the event is always easy, and problems once solved present no difficulties, indeed, may be represented as never having had any, and expert witnesses may be brought forward to show that the new thing which seemed to have eluded the search of the world was always ready at hand and easy to be seen by a merely skillful attention. But the law has other tests of the invention than subtle conjectures of what

> might have been seen and yet was not. It regards a change as evidence of novelty, the acceptance and utility of change as a further evidence, even as demonstration."

Eibel Co. v. *Paper Co.,* 261 U. S. 45:

> "The fact that in a decade of an eager quest for higher speeds this important chain of circumstances had escaped observation, the fact that no one had applied a remedy for the consequent trouble until Eibel, and the final fact that when he made known his discovery, all adopted his remedy, leave no doubt in our minds that what he saw and did was not obvious and did involve discovery and invention" (p. 68).

This Court in *Kelley* v. *Coe,* 99 F. 2d 435, exhaustively reviewed the authorities on this point in a case presenting closely parallel facts. There, as here, the art has for many years recognized the difficulties inherent in the extensively used standard apparatus. There, as here, abortive efforts were made from time to time to remedy the defects, but without success. There, as here, the departure from the old unsuccessful apparatus to the new was a comparatively simple change which excited wonder that it was not thought of before. This Court there held, in reversing the lower Court and the Patent Office, that the test of invention was not how simple the change seemed in retrospect.

> "The use of suction methods for ventilation and dust removal by means of industrial and household vacuum cleaners has long been known. The possible applicability of such methods to dust removal in rock-drilling operations seems obvious. But, although a number of experimenters attempted to achieve the desired result, the important fact is that none of them succeeded. Their proposals were tried out and rejected by the industry. They never passed beyond the theoretical or experimental stage. Prior to Kelley's discovery, and in spite of the series of patents theretofore granted, the industrial practice was either to suffer the dust or to use wet drilling. His method was the first achievement of dustless, dry drilling and it was a complete success,

> hygienically, as well as from the point of view of economic efficiency. This seems to make the classical picture of an invention.
>
> The fact that Kelley's method may seem simple in its operation does not disprove invention. The difference between it and the prior art may not be great in a physical sense, but slight as it may seem to be it was sufficient to achieve success where success had never before been achieved. It was not merely one step in a developmental process, but was the one step from failure to success" (439, 440).

Other cases where this Court has on like facts held an applicant entitled to his patent are:

Davies v. *Coe,* 83 F. 2d 602;
Gasoline Products Co. Inc. v. *Coe,* 87 F. 2d 550;
Hazeltine Corp. et al. v. *Coe,* 87 F. 2d 558;
Cramer v. *Coe,* 95 F. 2d 115;
The Mathieson Alkali Works Inc. v. *Coe,* 99 F. 2d 443;
Carbide & Carbon Chemicals Corp. v. *Coe,* 102 F. 2d 236;
Thornton v. *Coe,* 102 F. 2d 247.

Conclusion

It is respectfully urged that the claims presented here define a novel, useful invention which has proved of great value to the tobacco industry and that the applicant's prior patent No. 2,051,348 does not, because of its restricted claims, constitute a bar on the ground of double patenting to the grant of the claims here in issue.

It is therefore submitted that the relief prayed for should be granted.

W. B. Morton,
Clarence M. Fisher.

New York, N. Y.
November 12, 1947

Incomplete

APPENDIX TO BRIEF FOR APPELLANT

In the

United States Court of Appeals

For the District of Columbia

United States Court of Appeals
for the District of Columbia
FILED NOV 17 1947
Joseph W. Stewart
CLERK

No. 9660

Forrest H. Smith,
Appellant,

vs.

Lawrence C. Kingsland, Commissioner of Patents,
Appellee.

Appeal From the District Court of the United States
for the District of Columbia

Filed October 6, 1947

APPEAL FROM THE JUDGMENT OF THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF COLUMBIA

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IN THE

District Court of the United States

FOR THE DISTRICT OF COLUMBIA

Civil Action No. 9660

◆

FORREST H. SMITH, Kinston, N. C.,
Plaintiff,

vs.

CASPER W. OOMS, Commissioner of Patents,
Washington, D. C.
Defendant.

◆

Specification of Application for Letters Patent Serial No. 464,245, Filed November 2, 1942.

This invention relates to drying houses and more particularly to drying houses especially adapted for curing and drying tobacco.

This application is a continuation of my application Serial No. 41,465, filed September 20, 1935, and my application Serial No. 221,288, filed July 26, 1938. It is also a continuation in part of my application Serial No. 467,542, filed July 12, 1930, now Patent No. 2,051,348.

In the curing of "bright" tobaccos such as used in the manufacture of cigarettes, it is desirable that the temperature and the circulation of the heated gases be uniform throughout the barn and that no part of the tobacco be subjected to high temperatures. Prior to the invention disclosed in the above designated patent it was the universal practice to heat the tobacco barns indirectly by means of wood fires in "flues", consisting usually of large sheet iron pipes extending across the floor of the barn with the open ends projecting beyond the walls of the barn.

The fires require watching and attention day and night but even with the greatest care to more than approximately maintain a uniform temperature and air circulation throughout the house, very frequently the tobacco immediately over the "flues" is overheated and has to be sold at a much reduced price.

The object of my invention is to provide an improved method and apparatus for curing bright tobacco, wherein a uniform temperature and circulation of the drying currents is maintained with a resulting product of superior quality.

I have discovered that a much more uniform drying of the tobacco can be secured by employing a number of individual small oil burners distributed throughout the floor of the tobacco house, with baffling means for directing the individual small columns of heated gas produced by each burner, into the spaces between the burners, thereby producing a substantially uniform upwardly rising column of moderately heated air with no part substantially higher in temperature or velocity than other parts.

Prior to my invention it was the universal belief that the products of combustion of the fuel used for curing the tobacco would discolor the "bright" leaves and hence "fire-curing" was confined to heavy, dark tobacco. This is true of such fuels as wood and coal which contain impurities such as tars and the like which do not burn completely but volatilize instead and condense on the tobacco leaves. I have discovered, however, that the products of combustion from fuel oil may be discharged directly into the barn without discoloring the tobacco and with the important advantage that the water vapor resulting from the combustion of the hydrogen component of the fuel prevents the tobacco from drying too rapidly, thereby reducing the loss due to shrinkage in weight and also improving the quality of the product.

Appendix.

Stated more specifically, an object is to provide a drying house equipped in a novel manner with small separate fluid fuel burning heating means adapted to be readily installed in different parts of the house so as to facilitate the maintenance of an even temperature throughout the house, and the uniform circulation of heated gases.

Other objects are to provide a drying house with improved fuel control means and to provide improved heat radiating means.

Further objects will become apparent from a reading of the following description, the appended claims, and the accompanying drawings, in which:

Figure 1 is a view in horizontal section through the walls of a drying house showing heating equipment in elevation;

Figure 2 is a view in front elevation of a fluid fuel burning heating unit;

Figure 3 is a vertical sectional view taken on the line 3-3 of Figure 2;

Figure 4 is a fragmentary vertical sectional view taken on the line 4-4 of Figure 3; and

Figure 5 is a view similar to Figure 1 but showing a modified arrangement of heating equipment.

In Figure 1 there is shown a drying house A comprising walls 1, heating units B, B^1, B^2, B^3, B^4, B^5, and B^6 disposed in spaced relation within the house, fuel supply means generally designated C located outside of the house, and separate conduits D, D^1, D^2, D^3, D^4, D^5, and D^6 connecting the heating units B, B^1, B^2, B^3, B^4, B^5, and B^6, respectively, and independently to the fluid fuel supply means C. For reasons to be explained further on, the conduits D, D^1, D^2, D^3, D^4, D^5, and D^6 preferably are of flexible material, such, for example as copper tubing.

Appendix.

The fuel supply means C comprises a storage tank or reservoir, communicating with a service tank 3 by means of a pipe 4, the service tank 3 preferably being equipped with suitable means, such for example as a float control valve, for maintaining a constant level of fuel. Flow control valves 5, 5^1, 5^2, 5^3, 5^4, 5^5, and 5^6 are interposed, respectively, in the conduits D, D^1, D^2, D^3, D^4, D^5 and D^6, and for convenience are arranged in grouped relation outside of the house.

The heating units are all of the same construction so that a description of the unit B will serve as a description of all of the units. As shown in Figures 2, 3 and 4, the heating unit B comprises a radiator and frame structure generally designated 6 and including a rear wall 7, a front wall generally designated 8, and walls 9 and 10, a flat top 11, and peaked roof 12 disposed above the top 11. As is clear from Figure 3, the rear wall 7 terminates below the flat top 11 thereby providing a space between the top or rear wall and the top 11 for the circulation of air. The front wall comprises two sections, viz., a fixed lower portion 8^a and a movable upper portion 8^b having pin and slot hinged connection to the frame 6, the connections in the form shown comprising pins 13 connected to the frame and received by slots 14 in the front wall portion 8^a. These connections permit the upper front wall portion 8^b to be moved from a vertical position to the position shown in Figure 3 to give access to the burners within the radiator structure and which will be described later. In order that the upper wall portion 8^b may be secured in the vertical position during normal operation, the wall portion is provided at its opposite ends with inclined open-end slots 15 adapted to cooperate with pins 16 secured to the frame, the arrangement being such that when the movable wall portion is swung to a substantially vertical position it may be lifted slightly by virtue of the lower slots 14 and then lowered in such manner that the pins 16 will pass relatively into the inclined slots 15, the weight of the movable wall portion then maintaining the pins 16 and inclined slots 15 in cooperative engagement until the movable wall portion is raised for the purpose of disengagement.

A plurality (in the form shown, three) of burner units, each generally designated 17, is disposed within the frame and radiator structure. Since the burner units are of similar construction, it will be necessary to describe only one of them. The burner unit shown in Figures 3 and 4 comprises a bracket 18 secured to the frame and supporting a sleeve 19 which slidably receives a hollow stem 20, the sleeve 19 being connected at its bottom end to the conduit D, and the stem 20 being connected at its upper end to the pan of a burner proper 21 which may be of any well known approved kind. The arrangement is such that fluid under the static pressure head in the service tank 3 will be delivered through the conduit D up through the sleeve 19 and stem 20 to the burner proper 21. Means preferably are provided for raising and lowering the burner proper in order to control the height of the flame in the individual burner in a well-known manner. In the form shown, such means includes a crank 22 connected by means of a link 23 to the burner proper and having a handle 24 located exteriorly of the frame structure by means of which the burner proper may be raised or lowered at will.

In some cases, owing to uneven conditions of the floor or ground upon which the burner unit rests, it may be desirable to level the burner with respect to the floor or ground. To this end, I have provided at each corner of the frame 6 and L-shaped foot 25 which receives a vertically extending screw 26, the four screws at the corners of the frame serving to support the latter and providing for the raising or lowering of any corner of the burner as may be required in order to effect leveling. The screws 26 also may be operated in equal amounts in order to raise or lower the heating unit as a whole, which in some cases may be desirable or necessary for altering the conditions of the flow to the three burners within that particular unit.

In operation, the heating units are arranged in spaced relation within the house, the particular location and spacing of the units depending somewhat upon the construction of the house and its location and exposure, and weather conditions. In a house of the kind indicated in Figure 1, it usually is necessary to dispose one unit in each of the four corners, one in the middle, and other units in such positions as to eliminate long expanses of wall space. The units are then all leveled by means of the screws 26 and are brought each to about the same height above the floor or ground. The crank handles on the various burners are then operated to lower the associated burners so as to bring the burner pans at about the same level as the fuel in the service tank 3. Thereafter the valves 5, 5^1, 5^2, 5^3, 5^4, 5^5, and 5^6 are opened equally so as to permit fluid fuel to the various burners. After the burners are lighted, the handles 24 are separated so as to cause a substantially equal rate of combustion in the various burners and, if needs be, one or more of the heating units may be raised or lowered in order to provide the desired flow conditions. After these adjustments have been made, further control of the temperature at various parts of the drying house may be effected from outside of the drying house by means of the valves 5, 5^1, 5^2, 5^3, 5^4, 5^5, and 5^6.

If it is determined that any particular part of the drying house becomes either too warm or too cold, one of the heating units may be moved bodily in order to correct this condition, the flexible conduits permitting this to be done without disturbing communication of the burners of that unit with the source of supply. As indicated in Figure 1, for example, the burner B^1 may be moved to the dotted line position if conditions require that more heat be radiated in that particular part of the drying house.

It will be observed that, by virtue of the arrangement described, it is possible to control the flow of fuel to the burners in four different ways: first, by the positioning of the constant fuel level tank 3; second, by raising or lowering individual burners by means of the crank handles 24; third, by raising or lowering the burner units; and, fourth, by means of valves 5, 5^1, 5^2, 5^3, 5^4, 5^5 and 5^6.

In the modified arrangement shown in Figure 5, each unit is supplied with fuel from a separate tank E. E^1, E^2, E^3, E^4, E^5, and E^6 which may be connected to the burners by means of flexible conduits as in the form shown in Figure 1. In the Figure 5 arrangement, valves F, F^4, F^5, and F^6 are interposed in the conduits D, D^4, D^5, and D^6. It may in some cases be permissible to omit the valves, and to rely upon the raising and lowering of the units and/or the burners for controlling the fluid flow. The conduits D^1, D^2 and D^3 are shown in Figure 5 as being without valves.

The arrangements disclosed herein embody the invention in practical and the present preferred forms, but it will be understood that changes may be made in the construction and arrangement of the parts without departing from the invention as defined in the claims.

I claim:

1. In a drying house for curing tobacco, means for maintaining said house throughout substantially its entire interior at a temperature to cure bright tobacco supported therein, said means comprising a plurality of small sepa-

rate low-intensity oil-burning heaters arranged about the floor of said house in a manner to provide a substantially uniform temperature throughout the cross sectional area of said house, deflecting baffles overlying said heaters and arranged to deflect the products of combustion laterally into the spaces surrounding said heaters, means for supplying fuel to said heaters, and means for independently regulating the rate of combustion of said separate heaters.

2. The method of curing tobacco in a drying house which consists in burning at a plurality of locations throughout the floor of the house a liquid fuel to thereby generate a number of columns of heated products of combustion, directing said products of combustion laterally into the spaces surrounding said locations in such manner as to produce a mixture of said products of combustion with the air of the drying house, which mixture is of substantially uniform temperature throughout the cross sectional area of said house, said individual heaters being provided in sufficient number to heat substantially the entire interior of said house to a temperature sufficient to cure bright tobacco, but at no point above the mixing zone high enough to injure said tobacco.

3. In a drying house for curing bright tobacco, a plurality of small separate low-intensity oil-burning heaters arranged about the floor of said house in a manner to provide a substantially uniform temperature throughout the cross sectional area of said house, each said heater comprising a plurality of burners and deflecting baffles overlying said burners and arranged to deflect the products of combustion laterally into the spaces surrounding said heaters, means outside said house for supplying fuel to said heaters, connections between said heaters, and means for independently regulating the rate of combustion of said separate heaters.

Complaint for the Issuance of United States Letters Patent.

I. The jurisdiction of this Court depends upon the patent laws of the United States, this complaint being filed under Section 4915, Revised Statutes (Comp. Stats. 9460; U. S. C. Title 35, Section 63), as amended by Act of March 2, 1927.

II. The plaintiff, Forrest H. Smith, is the sole inventor of the subject-matter disclosed and claimed in an application for United States Letters Patent for improvements in Drying Houses, filed by him on November 2, 1942, Serial No. 464,245.

III. The Board of Appeals of the United States Patent Office in a decision rendered on the 2nd day of June, 1945, refused to allow three claims of said application Serial No. 464,245.

IV. The said three claims in said application Serial No. 464,245, which the Board of Appeals of the United States Patent Office refuses to allow are as follows:

> 1. In a drying huose for curing tobacco, means for maintaining said house throughout substantially its entire interior at a temperature to cure bright tobacco supported therein, said means comprising a plurality of small separate low-intensity oil-burning heaters arranged about the floor of said house in a manner to provide a substantially uniform temperature throughout the cross sectional area of said house, deflecting baffles overlying said heaters and arranged to deflect the products of combustion laterally into the spaces surrounding said heaters, means for supplying fuel

to said heaters, and means for independently regulating the rate of combustion of said separate heaters.

2. The method of curing tobacco in a drying house which consists in burning at a plurality of locations throughout the floor of the house a liquid fuel to thereby generate a number of columns of heated products of combustion, directing said products of combustion laterally into the spaces surrounding said locations in such manner as to produce a mixture of said products of combustion with the air of the drying house, which mixture is of substantially uniform temperature throughout the cross sectional area of said house, said individual heaters being provided in sufficient number to heat substantially the entire interior of said house to a temperature sufficient to cure bright tobacco, but at no point above the mixing zone high enough to injure said tobacco.

3. In a drying house for curing bright tobacco, a plurality of small separate low-intensity oil-burning heaters arranged about the floor of said house in a manner to provide a substantially uniform temperature throughout the cross sectional area of said house, each said heater comprising a plurality of burners and deflecting baffles overlying said burners and arranged to deflect the products of combustion laterally into the spaces surrounding said heaters, means outside said house for supplying fuel to said heaters, connections between said heaters, and means for independently regulating the rate of combustion of said separate heaters.

V. The defendant, Casper W. Ooms, Commissioner of Patents of the United States, by the aforesaid decision of the Board of Appeals of the United States Patent Office has refused and still refuses to grant Letters Patent of the United States to the plaintiff on his said application Serial No. 464,245, including said three claims recited in Paragraph IV hereof.

VI. The said decision of the Board of Appeals was rendered on or about the 2nd day of June, 1945, and within six months last past, and no appeal has been taken from said decision of the Board of Appeals to the Court of Customs and Patent Appeals, and no such appeal is pending or has been decided.

Wherefore, the plaintiff demands that this Honorable Court authorize the Commissioner of Patents to issue to Plaintiff, Letters Patent of the United States embodying said claims 1, 2 and 3, upon the filing in the United States Patent Office of a certified copy of such adjudication, and upon compliance with the requirements of the law for such cases made and provided.

Forrest H. Smith,

By Clarence M. Fisher,
Clarence M. Fisher,
Attorney for Plaintiff,
834 National Press Bldg.,
Washington, D. C.

W. B. Morton,
of Counsel.

Answer to the Complaint.

To the Hororable the Justices of the District Court of the United States for the District of Columbia.

I. Defendant admits the allegations of paragraph I.

II. He admits that on November 2, 1942, plaintiff, claiming to be the sole inventor of alleged improvements in Drying House, filed in the Patent Office an application for patent thereon, to which application Serial No. 464,245 was given. He denies, for reasons hereinafter given, that the subject-matter claimed in said application constitutes a patentable invention.

III, IV. He admits the allegations of paragraphs III and IV.

V. He admits that by the decision rendered by the Board of Appeals of the Patent Office on said application he has refused and still refuses to issue to plaintiff a patent containing any of claims 1, 2 and 3 of said application, which claims are as set out in paragraph IV. He states that the said claims are unpatentable in view of the following prior patents and for the reasons given by the examiner in his statement in answer to the appeal and the decision of the Board of Appeals, copies of which will be furnished at the trial:

Brook	1,368,018	Feb. 8, 1921,
Mims	1,493,889	May 13, 1924,
Reynolds	1,509,902	Sept. 30, 1924,
Smith	1,811,980	June 30, 1931,
Smith	2,051,348	Aug. 18, 1936.

Profert of copies of these patents is hereby made.

VI. He admits the allegations of paragraph VI.

W. W. Cochran,
Solicitor, U. S. Patent Office,
Attorney for Defendant.

January 3, 1946.

I hereby certify that a copy of this Answer to the Complaint was mailed today, January 3, 1946, to the attorney for plaintiff, Mr. Clarence M. Fisher, National Press Building, Washington, D. C.

W. W. Cochran,
Solicitor.

Findings of Fact.

1. This is an action under Section 4915 R. S. (U. S. C. title 35, sec. 63) in which the plaintiff Forrest H. Smith, seeks to have the Court authorize the issuance of a patent on claims 1 to 3, inclusive, of his patent application, Serial No. 464,245, filed November 2, 1942.

2. In 1938, the plaintiff herein filed an application for patent, Serial No. 221,288, identical in disclosure with that at bar, and during the prosecution of that application, two claims thereof were rejected by the examiner and the Board of Appeals of the Patent Office as unpatentable because of certain prior art patents previously granted to others. In 1941, plaintiff filed a bill of complaint under Section 4915 R. S. in this Court seeking a review of the action of the Board of Appeals in application Serial No. 221,288. This bill was dismissed on November 2, 1942, on stipulation of counsel without a determination on the merits.

3. Plaintiff's presently involved patent application, Serial No. 464,245, was filed on the same day that the bill was dismissed in application Serial No. 221,288.

4. Two of the claims at bar are identical with the two claims denied plaintiff in his earlier application, Serial No. 221,288, and the third claim involved in the present action presents no patentable difference thereover.

Appendix.

5. The application at bar discloses and claims an apparatus for and a method of curing tobacco. The structure disclosed is a curing barn equipped with a plurality of oil burning heaters arranged about the floor of the barn in a manner to provide a substantially uniform temperature throughout the cross sectional area thereof, each of the heaters being provided with an overlying baffle for deflecting the products of combustion laterally into the atmosphere of the barn, and with valve means for independently regulating the rate of combustion of the fuel supplied thereto. Method claim 2 is essentially for the operation of the structure described.

6. The patent to Brock, 1,368,018, granted on February 8, 1921, shows a tobacco curing barn in which three oil burners extend longitudinally of the barn to provide practically a uniform temperature in the area occupied by the tobacco to be cured. Above each burner is a baffle to deflect the products of combustion laterally into the barn atmosphere. The oil supply is exteriorly of the barn and each burner is shown provided with a separate valve for controlling the rate of combustion.

7. The patent to Mims, 1,493,889, granted on May 13, 1924, discloses a tobacco barn provided with a single oil burning heater. A baffle overlies the heater for deflecting the products of combustion into the atmosphere of the barn. The oil supply is exteriorly of the barn, and a valve is provided at the burner for controlling the rate of combustion.

8. The patent to Reynolds, 1,509,902, granted on September 30, 1924, shows a tobacco barn equipped with a single oil burning heater, the heater being comprised of three oil burners each independently valve controlled. The burners are covered by a baffle, and the whole is covered by an awning having perforations in the top thereof. The

awning extends substantially from wall to wall of the barn. The heated products of combustion are deflected by the baffle and spread out under the awning uniformly, and then pass through the perforations therein so that even and more uniform distribution of the heated products is obtained.

9. Plaintiff's patent 2,051,348, granted on August 18, 1936, likewise shows a plurality of oil burning heaters distributed uniformly about the floor of a tobacco barn, each burner being provided with a baffle for deflecting the products of combustion laterally into the barn atmosphere. The fuel supply is outside the barn, and independent control of each burner is achieved by individual valves.

10. The claims at bar are for the same invention as claim 2 of plaintiff's patent 2,051,348, and are unpatentable in the application at bar, because to allow said claims would result in double patenting.

11. None of claims 1, 2, and 3 at bar recites anything amounting to an invention over any of the patents to Brock, Mims and Reynolds.

Conclusions of Law.

1. The dismissal of the prior suit in equity in the prior application, Serial No. 221,288, by stipulation of counsel, was without prejudice. Such dismissal *does not* operate as an estoppel against the plaintiff in this action under the doctrine of *res judicata.*

2. Plaintiff is not entitled to a patent containing any of the claims set forth in the bill of complaint.

3. The complaint should be dismissed as to all claims.

Edward M. Curran,
Justice.

Judgment.

This action came on to be heard at this term and thereupon upon consideration thereof, it is this 28th day of May, 1947.

Adjudged that the complaint be and it is hereby dismissed, with costs against the plaintiff.

Edward M. Curran,
Justice.

Approved as to form:

Clarence M. Fisher,
Attorney for Plaintiff.

Notice of Appeal.

Notice is hereby given that Forrest H. Smith, Plaintiff above named, appeals to the United States Court of Appeals for the District of Columbia from the final order entered in this action on May 28, 1947, dismissing his Bill of Complaint.

Clarence M. Fisher,
Clarence M. Fisher, Attorney for Appellant,
Forrest H. Smith,
National Press Building,
Washington, D. C.

Washington, D. C.
August 25, 1947

EMORY MARTIN MATTHEWS, was called as a witness and, having been previously duly sworn, was examined and testified as follows:

Direct Examination by Mr. Morton:

Q. What is your full name, Mr. Matthews? A. Emory Martin Matthews.

Q. Where do you reside, Mr. Matthews? A. At Chatham, Virginia.

Q. What is your occupation? A. Well, I am associate agronomist for the Virginia Agricultural Experiment Station and tobacco specialist for the Virginia Extension Division.

Q. Your work is concerned chiefly with the growing and curing of tobacco; is that it? A. That is right; research in connection with tobacco.

Q. How long have you been connected with the Virginia Agricultural Experiment Station? A. For about thirteen years.

Q. Before that where were you employed? A. Well, I was County Agriculture Agent for five years, and before that I was tobacco specialist out in Rhodesia, South Africa, for three years.

Q. What is your education along technical lines, Mr. Matthews? A. Well, I graduated from VPI in 1925, in agriculture, and since then I have obtained an M.S. from Cornell University in 1932.

Q. On that same subject? A. Yes; in agricultural work.

Q. Now, can you tell us, briefly, what is the present day practice of curing bright tobacco?

> The Court: You might tell me what "bright tobacco" is.
>
> Mr. Morton: Well, it is the kind that Lucky Strike advertises, largely on the back of the Saturday Evening Post.

By Mr. Morton:

Q. Before you tell us about curing, will you answer the Court's question? What is bright tobacco? A. Well, we speak of bright tobacco, and we also speak of it as flue cured tobacco, because for probably 75 years we have cured it with flues, principally.

In the old type, we had fire furnaces with flues going around the barn to conduct the heat, and we speak of it as flue cured or bright tobacco. Of course, the "bright tobacco" is to distinguish it from the darker color. Bright tobacco should be lemon yellow, or as near to that as possible.

By the Court:

Q. Do you call bright tobacco bright after the application of heat? Is that it? A. Well, we speak of bright tobacco as a type of tobacco right from the time it is planted until we get through curing it and marketing.

> The Court: Very well.
>
> Mr. Morton: You cure one type of tobacco one way, and another another way. One is suited for one use, and another for another use.
>
> The Witness: Did you want me to describe the curing at present?

By Mr. Morton:

Q. Just give us a brief description of the flue cured method that you referred to. What sort of apparatus do you have set up for that? A. Well, in the flue cured method, after the tobacco is harvested, of course it is hung in the barns. Then fires are made in furnaces, which are fired from the outside of the barn, and the heat is conducted around in the barn with these metal flues. Of course, there is a smoke stack to take the extra exhaust gases out of the barn.

Q. The heat is radiated off these metal flues to supply the heat to the barn; is that correct? A. That is correct.

Q. What other method do you know of that has come into use in more or less recent years? A. Well, the oil curing system, such as Mr. Smith's.

Q. How long have you personally had any experience with the open flame oil-burning system? A. For nine years. We installed one of these in 1938 and used it that year, and we have used it every year since, for nine years.

Q. That is, you installed it at the experiment station? A. In one of the barns at the experiment station.

Q. And you have barns at the experiment station where you test various curing methods, and that sort of thing? A. Yes. We cure the tobacco which we grow on the plots, and we also do research in curing methods.

Q. You say in one of these barns you installed an open flame oil-burning system. When? A. In 1938.

Q. Where did you acquire that system which you installed at that time? A. What is the question?

Q. Where did you acquire the system? A. We purchased that from Mr. Smith, or his representative.

Q. Mr. Smith is the applicant here? A. Yes.

Q. Now, can you give us a brief description of the oil-burning open-flame system which you acquired from Mr. Smith in 1938? A. Well, that open-flame oil-burning system consists of the following. In our particular case there were 20 burners distributed over the area of this barn, which was 16-½ feet inside—20 burners which are fed with an oil pipe from the outside of the barn, and each burner has a hood above the burner which would distribute the heat and act to prevent the heating of the tobacco too much right above each burner—act as a sort of buffer. That is roughly the description of the system.

Q. What sort of burners were those? A. Those were oil burners similar to those used in oil stoves for cooking, and so forth.

Q. Just a wick type? A. Just a wick type. They had asbestos wicks.

Q. Now, is it necessary to vary the temperature maintained in the tobacco barn during the curing process? A. Yes, it is. There is somewhat of a science or art in curing tobacco, and there are four really distinct stages in the curing process, and, of course, they call for different temperatures.

Q. Will you give us a brief statement of the procedure you follow from the time the tobacco is hung in the barn until it is cured? A. We like to harvest only ripe tobacco and put it in one barn and we like to start the fires the same night after the barn is filled, and we begin with the first stage of the curing, which is the yellowing process.

We usually run the temperatures about 10 degrees above the outside temperatures, which means usually from 80 and it goes on to 110, for the yellowing process, the first stage of the curing.

During that stage the idea is to sweat that tobacco with a low temperature and make the leaf develop that lemon yellow color as near as possible.

After we get the desired color, then we have the second stage of fixing the color, it is usually spoken of, and there we have to give it a little more heat and give the barn or the tobacco some ventilation, both at the top of the barn and the bottom, in order to drive the surplus moisture from the leaf to prevent what we speak of as sponging. If that moisture stays on there too long, it gives the tobacco an ugly, motley brown color, which we speak of as sponging. So we increase those temperatures at that color-fixing stage from around 110 to about 125 or 130, in fixing the color.

Then we have a third stage, what we speak of as drying the leaf. During the latter part of the color fixing, the leaves begin to dry a little at the tips, and we must continue that drying and not allow the moisture to stand too long on the leaf. So we gradually increase the temperature until you get to about 140, with the ventilator still open.

We keep that temperature until all the leaf, with the exception of the stem, has been cured, until it is dry—not over 140 to 145—and then we have the last stage that we speak of as drying the stems.

We go gradually from about 140 up to about 175, until all the moisture has been driven off from the stems—the tobacco stems and all.

Q. Then, your heating equipment must be capable of maintaining temperatures anywhere in the range from, say, 90 degrees to 175 or 180 degrees? A. That is right.

Q. Those are Fahrenheit temperatures? A. They are Fahrenheit temperatures.

Q. Is the quality of the tobacco affected by failure to maintain these proper temperatures during the successive stages of the curing cycle? A. Yes; the quality can be affected considerably if the temperatures are allowed to drop down too low at certain stages of curing.

I spoke about that moisture that is on the leaf when we harvest it and when we are yellowing it. If that remains on there when you are trying to increase the temperature, if the temperature drops too low you get this ugly, sponging effect. But if your temperature at any place in the barn is raised too high, we get what we speak of as scalding. The tobacco turns blackish, an ugly color, from too much heat on any one point.

Of course, those things do affect the quality and the sales price of tobacco very much.

Q. Is it important also to maintain the temperature uniform throughout the entire barn during the curing process? A. It is very important in curing that we have the heat so arranged that you can get a uniform temperature throughout the various sections of the barn. As I spoke of it, if it falls too low, we get damage from sponging. If it gets too high at any one point, we get damage from scalding. So it is important that we have it uniform.

Q. After you purchased the Smith curers did you continue to use the wood burning flue systems in any of those barns? A. Yes, we continued to use the wood burning flue systems in one of our barns for seven years after that.

Q. Was the operation of the curing in those barns under your direction? A. It was.

Q. And you had an opportunity to compare the wood burning flue system with the Smith open-flame kerosene-burning system? A. That is right.

Q. Well, now, how are the temperature changes obtained or regulated with the old wood burning flue system? A. With the old wood burning flue system, there are practically no means of controlling temperature other than stoking your fires with more wood outside, and then waiting for that fire to die down. Some few barns were equipped with grates and doors and dampers on the furnaces, but there was not probably over one per cent of the barns so equipped, and that did not control it completely.

Q. What did you observe at your experiment station as to the temperature regulation obtained in the two systems? Did you make any comparison with thermometers, or anything of the sort, to determine to what extent your temperatures were controlled in the two different systems? A. We did. We were making some studies on curing about that time, and we had recording thermometers, thermographs, located in both the open furnace wood fire barns and some in the oil burning barns—this particular barn—and we made charts, which are recorded in our annual reports, which showed the temperatures during the various stages of curing.

Q. How did they compare? Which barn had the most evenly regulated temperature? A. Well, that temperature line on the chart from the oil curing barn was a very smooth line. It showed a much more constant temperature and gradual rise in temperature.

There were wide fluctuations in the line of temperature with the wood burning barn—the old fashioned barn. Sometimes that temperature varied 10 or 15 degrees.

Q. And that barn was operated by a man who is skilled in that sort of work, I suppose, was it not? A. Yes. We had one experienced curer who did our curing. He has been doing it for 20 years.

Q. Who was operating under your direction, I gather? A. That is right.

Q. Will you just tell us briefly in what respects the open-flame oil-burning method of curing differs from the old wood fired flue system? A. Well, the open-flame system has a large number of these burners distributed around the barn, which distributes your heat uniformly all over the different sections of the barn; and, too, it has baffles above each burner which would prevent overheating the tobacco immediately above any burner.

It has a means there of using only the number of burners that you require. You could raise any burner and stop it from burning, and it has also a carbureter outside which would determine the total amount of fuel being consumed in the barn, to regulate the amount of fuel consumed.

Now, the old fashioned wood burning flue system, of course, as I mentioned, has practically no means of controlling the temperature. With that you have these flues going around the barn, and they sometimes get red hot in the section immediately adjoining the furnace, which means that that section of the barn is much hotter, as a rule, than the rest of the barn.

Q. Now, you were familiar, were you not, with the practices of curing tobacco throughout the bright tobacco belt at the time you purchased this Smith oil-burning curer? A. Yes.

Q. Well, at that time, to your knowledge, was there any other system of curing tobacco in use except the flue system which you described? A. Previous to that time I knew of no other except the old flue system.

Q. Have you made some study of the comparative operating costs of the wood burning flue system and the Smith open flame oil burning system? A. We did, for a number of years.

Q. What was your conclusion on that question? A. The open burning oil system of Smith's cost much less in fuel than the old system. I think, on the average, for nine years the oil curing system has cost us, on the average, a little more than eight dollars per barn for fuel. With the wood-burning systems we used, in the same sized barn, approximately a cord and a half of wood per barn, and that would amount to, of course, even at the present prices of pulp wood, $15 to $25 per barn for wood.

Q. How about the labor cost of the two outfits? A. Well, the cost of labor for curing for the operator is very small with the oil-burning system. The temperatures will remain constant, or practically as you wish them to, and the operator does not have to stay there all the time.

He can watch his tobacco in the morning, noon, and night, and go home and go to sleep, and go to work in the day, with the oil curing system; whereas with the old type wood fire stoker system, he has to stay there practically all the time and stoke his fires.

Q. How do the two systems compare from the standpoint of fire hazard? A. Well, I would say the old flue system would certainly have much more of a fire hazard, because those flues are heated red hot often for an area of about six feet where they leave the furnace, whereas with Smith's curing system, the little baffle or hood above each burner never gets very hot. It never gets hot enough to ignite a leaf of dry tobacco; and, of course, since the heat is distributed all over the barn, there is not very much heat in any one place.

Q. That is, the hood over the burner never gets hot enough to ignite anything? A. No. Sometimes a leaf of tobacco might lie there during the curing stages, and it never blazes.

> Mr. Morton: Your Honor, I would like to ask this witness a few questions about these patents that have been introduced. I think you have copies of them there.
>
> The Court: Do you mean these (indicating)?
>
> Mr. Morton: No, your Honor.
>
> Mr. Schimmel: They are in our folder, your Honor, A, B, C, and D.
>
> Mr. Morton: Here are three extra copies. Do you have them there, your Honor?
>
> The Court: I have them here.

By Mr. Morton:

Q. I will hand you copies of the three patents that are set up by the Patent Office other than the two Smith patents, and I will ask you to refer first to the Brock patent. Have you read that patent (handing documents to the witness)? A. The Brock patent?

Q. Yes, the Brock patent, 1,368,018. A. Yes, I have read that and studied the diagram.

Q. Referring to Figure 1 of the drawings, can you tell us, in a few words, what that patent discloses? A. Well, that illustration shows an apparatus for heating which resembles a large blow torch.

Q. What is the part marked 11 in Figure 1 of the drawings? A. That seems to be some kind of pipe with small outlets for the flame, I suppose.

Q. How is the fuel supplied to that pipe? A. Similar to a blow torch. There is a drum on the outside for compressing the air, and this jet marked 8 or 12—

Q. It is labeled 9, I think. A. 9.

Q. 9 is the jet, is it not? A. That is supposed to blow your gases into these tubes, where it is ignited and burned. That is my understanding of the purpose of it.

Q. What are the things shown in Figure 3 of the drawings, which are shown also in Figure 2, as suspended over the burners? A. There is some kind of a hood suspended over the burners which is supposed to act as a baffle or deflect the heat somewhat. The way this hood or deflector is shown, with only a few of these burners underneath, each burner must get very, very hot, and with this hood suspended above it, the leaves of tobacco will stick on to there, I should think, and there would be some danger of burning.

The Court: Wait a minute. Do not tell me what you think.

The Witness: Sorry.

By Mr. Morton:

Q. The hood is composed of two wings there that incline upwardly from the middle to form sort of a trough, is it not? A. That is right.

Q. What would happen if leaves of tobacco would drop down on that trough? A. With intense heat underneath, the leaf would burn if it was nearly cured or in a dry state.

Q. You say there are three long blow torch burners shown here extending virtually the length of the barn; is that correct? A. That is correct.

Q. And over each of them is suspended a sheet metal trough such as shown in Figure 3; is that correct? A. That is right.

Q. Now, from your experience in growing and curing tobacco of the kind we are interested in here, what would you say as to the usefulness of that structure for that purpose? A. Well, with those three burners in that blow torch style, I can't conceive of its accomplishing the results of curing tobacco as we like to have it done.

By the Court:

Q. Have you ever seen it work? A. I beg your pardon?

Q. Have you ever seen this Brock invention in operation? A. No, I have never seen it in operation.

The Court: Then, I do not think the witness is qualified to tell what results it would give.

Mr. Morton: Well, he has studied the patent, the description of it.

The Court: I understand that, but he is now attempting to tell what the results would be, and he has never seen it, outside of this figure or description that he is referring to. That would be, I imagine, guessing on his part, as to whether the Brock patent is successful in operation or not.

Mr. Morton: Of course, we do not know that there ever was an actual structure.

The Court: I do not, either.

Mr. Morton: Our patent has been refused on the basis of this drawing, not on any evidence that there ever was a Brock structure, or anything of the sort, so we are asking this witness, who is qualified in what you do to cure tobacco, from his experience, whether he finds it in this drawing.

By the Court:

Q. The Brock patent is also a method of curing tobacco, is it not, by producing heat under it, with the idea of creating a uniform temperature in the area occupied by the tobacco? Is that not the purpose of the patent? A. Well, I do not think they claim a uniform temperature throughout the barn, but it is supposed to supply the heat necessary to cure the tobacco.

Q. He says in his claim:

"I claim:

"1. The herein described method of curing tobacco consisting in producing heat under the suspended tobacco of practically uniform temperature in the area occupied by the tobacco * * *."

A. Well, of course, I have not tried one of them out.

By Mr. Morton:

Q. Let me ask this question. Do you find in the Brock patent a disclosure of a plurality of low-intensity oil-burning units distributed over the floor under the tobacco? A. What was the first of that question?

> Mr. Schimmel: I object, Your Honor. It seems to me that the patent itself can answer the question. I do not think we need the opinion of the witness.
>
> The Court: The answer is no. I can see that.
>
> Mr. Morton: I prefer the Court's answer—"No".

By Mr. Morton:

Q. Will you refer to the Reynolds patent? That is number 1,509,902. You have studied that one also, have you not? A. Yes, I have.

Q. What is the part marked 10 in the Reynolds patent drawings? A. That is the burner for generating heat.

Q. And that is located at the middle of the barn; is that correct? A. That is my impression from the picture.

Q. What is the part marked 3 that appears over the burner, the burner being under the middle of it? A. The part marked 3 or 6 is the hood built above that one single stove or burner. The purpose of that is to deflect the heat and spread it over the barn.

Q. That hood apparently stands over practically the entire area of the barn, does it not? A. Judging from the illustration, it does.

Q. Do you find in that patent a number of small low-intensity kerosene or oil-burning units distributed over the barn floor? A. No.

Q. The heat there is generated— A. From one stove or burner.

Q. —from one stove in the middle of the barn; is that correct? A. That is correct.

Q. How about the Mims patent? What does that show? A. The Mims patent shows also a single stove of burner in the center of the building. That, I believe, is designed for treating vegetables, primarily.

Q. It is not primarily a tobacco curing system, is that correct, and that is just a central stove in the middle of the building? A. That is right.

Q. Do you know, Mr. Matthews, about what is the temperature of a flame of a Bunsen burner? A. It is approximately 3,000 degrees.

Q. Fahrenheit? A. Fahrenheit.

Mr. Morton: I think that is all.

Cross Examination by Mr. Schimmel:

Q. Mr. Matthews, I believe you said that in the old flue system, the flues were distributed around the floor of the barn? A. That is right. Well, they have furnaces, usually, in most barns, coming in from the outside, and the flues conduct the heat around the barn.

Q. Can you tell us what the object of distributing them all around the walls and the sides of the barn was? A. The object is to supply heat to the tobacco.

Q. Wouldn't you say uniformly—to try to get a uniform heat distribution? A. Well, that is the idea we are looking for.

Q. So that the Smith system which you have used and which is described in this specification merely substitutes an oil burner for those flues, the object being the same? A. The ideal object or objective we are working for is the same. The results we obtain are not the same.

Q. What would you attribute those to—the mere fact that you have a better burner? A. I attribute it to the fact that you have better distribution of the location points for distributing the heat where the heat is released. In the oil burners you do have it released in all portions of the barn, and with the wood burning flue system, by actual thermometer readings, the temperature will vary 10 to 15 degrees in different portions of the barn.

Q. Would not that be due solely to the inefficient fuel system? A. No. It is due to the arrangement of your heating units or heating radiation, the common method used in the flue system. As I mentioned, the flues are red hot where they leave the furnace during certain stages of the curing.

Q. Doesn't it seem to you that it is general knowledge that if you want to get a uniform heat distribution you provide the necessary number of radiating surfaces to accomplish that result?

> Mr. Morton: I object, Your Honor. Is this witness qualified to talk about what may or may not, abstractly, be common knowledge? What he is really asking the witness is what Your Honor has to decide, whether it is invention to provide this system.

The Court: I will allow the question.

Mr. Reporter, read it back, please.

The Reporter (reading): "Doesn't it seem to you that it is general knowledge that if you want to get a uniform heat distribution you provide the necessary number of radiating surfaces to accomplish that result?"

A. The proper number of radiating surfaces, properly distributed, and with the amount of heat that is required in each radiating surface, would provide it.

By Mr. Schimmel:

Q. Now, as I recollect, you were discussing the various stages in the curing of bright tobacco and the question of temperature control. Were not those known to the art before the Smith application? A. Were they common, did you say?

Q. Were they known to the art. A. They have been fairly well known for a number of years—stages of curing.

Q. I believe you also mentioned, in connection with the Smith device, the use of a carbureter. A. Yes. He has a reservoir for holding his fuel in a carbureter, which allows the quantity of fuel which is being consumed inside of the barn at any one time to be regulated with this carbureter device, just outside of the barn.

Q. I would like to show you the print of the drawings in the Smith application and ask you where is this carbureter you are speaking of (handing a document to the witness). A. Well, it must be right along here (indicating), judging from the picture, leading from your fuel tank—

Q. Do I understand that your meaning of a "carburetor" is merely a supply line for the fuel and nothing else but that? A. As I said, it regulates the rate of flow of the oil between your fuel tank and the burners in the barn.

Q. The carbureter in the automobile does more than that, doesn't it? Doesn't it mix the fuel with the air? A. I spoke of it as a carbureter. I was not using it in the term of a manufacturer, probably.

Mr. Schimmel: That is all.
Mr. Morton: That is all.
(The witness left the stand.)

Thereupon—

Forrest Hildred Smith was called as a witness and, being previously duly sworn, was examined and testified as follows:

Direct Examination by Mr. Morton:

Q. Will you give your name? A. Forrest Hildred Smith.

Q. Where do you reside? A. Kinston, North Carolina; 211 East Payton Avenue.

Q. What is your business, Mr. Smith? A. Manufacturing oil-burning tobacco curers—Smith oil-burning tobacco flues.

Q. You are the applicant in this case, are you not? A. Yes. Pardon me. May I correct that? I am president of the Smith's Heating, Incorporated, and Smith's Heating, Incorporated, manufactures the Smith open-flame oil-burning tobacco curers.

Q. You are also the Forrest H. Smith who is the patentee of Patent 1,811,980, are you not, which I show you (handing a document to the witness)? A. Yes, I am.

Mr. Morton: I think that is included, Your Honor, in what you have.

By Mr. Morton:

Q. You are also the patentee of Patent 2,051,348, are you not, issued August 18, 1936? A. Open-flame burner, yes.

Q. The first of these two patents shows the flue-type system, does it not, where the flue is heated by oil? A. That is right, it shows the flues.

Q. And your patent number 2,051,348, issued August 18, 1936, shows the open-flame type of heater? A. Burning under hoods, and so forth.

Q. And in your patent 2,051,348 each separate burner has its own individual hood; is that correct? A. That is right. May I correct that? It was also the intention to have the individual hood oil burner and also to make it in group type burners, if we so desired.

Q. Your present application was first filed in 1935, which was prior to the issuance of patent 2,051,348; is that correct? A. That is right.

Q. When did you first become interested in curing tobacco by means of oil heaters? A. I was raised on a farm and began to cure tobacco when I was big enough to throw wood in a furnace, and I have raised tobacco until I was about 21 years old, and during that time I cured tobacco, and I went in the field when the sun came up in the morning and cropped tobacco until it was sunset, and then go to the barn and hang the tobacco in the barn after night, and then part of the time have to sit up with the barn the rest of the night and throw wood in every thirty minutes to an hour. The next day I had to go back to the field and do the same thing over. That season usually lasted for about six or seven weeks.

I began thinking then about some way to change the situation. It kept growing in my mind, and in June or July, as I remember, of 1926, I had a lease on an option on a 101 room hotel, known at that time as the Center Hotel, in Florence, South Carolina.

I operated that, and I decided I would make an effort to go out and do this job. I sold the option, the lease on the hotel, and applied to an oil stove company for a job, and I traveled in Georgia, part of Tennessee, western North Carolina, and some of Alabama for about six months. At Christmas I resigned my position. That was in the fall of 1926.

I went to the town of Farmville, North Carolina, and made arrangements with Mr. J. T. Thorne to set up a curing device in his barn.

Q. When was that, Mr. Smith? In 1926? A. 1927.

Q. 1927? A. February, 1927, but at that time—I was trying to tell the story—at that time I did not set up this outfit with the burners burning into the metal flues. I put it in the furnace, and I made a failure of that.

Q. That is, he had a flue system with a furnace and you tried— A. He had a flue like you would burn the wood, and I was trying to heat the furnace. I made a failure.

Q. What is the nature of the next apparatus you tried? A. Then in 1929 I cut down a pasteboard and made up a flue system, and I filed a patent application from this pasteboard makeup of the flue system.

In the spring of 1930 I went to a flue shop and I had them make me just a plain set of flues—that is, the flue went all the way around the barn and one flue came down the center of the barn, and I had them cut holes underneath this flue, and I put these burners down, and I had the burners burning in the holes of those flues..

I had a smoke stack in that flue that went to the outside of the barn, and I had it cased in on the inside so that the odor of the oil—it was my belief and others' beliefs that if the burners were on the inside of the barn, it would make the tobacco smell like oil.

So when I lit the burners up and started curing tobacco, the wind blew down on the pipe on the burner, so I had to stuff that up. In that way I learned that the fumes did not make the tobacco smell like oil. So I went on ahead and cured it.

People got some of this tobacco and sent it to different places to have tests made to see if it had an oil odor. Then I made a test and was unable to find any oil odor on the tobacco so I immediately came to Washington and filed my application on the open-flame tobacco curer.

Q. When did you first experiment with the open-flame type of system such as shown in your second patent? A. Well, that was the open-flame oil-burning curer on the inside of the barn.

Q. Did you carry on experiments with that type of system? A. No. I just cured one barn of tobacco. That was in 1930. I immediately took that flue system out, and the next time I set it up was in 1934, when I set it up with individual hoods over them and distributed over the floor as evenly as I could.

Q. When did you start manufacturing these open-flame oil-burning curers such as Mr. Matthews purchased from you in 1938? A. In 1934 we manufactured four, and we cured three complete crops of tobacco.

In 1935 we manufactured 135.

In 1936, as I remember, about 750.

In 1937, as I remember, about 1,100.

In 1938, as I remember, we dropped back to maybe 900 or a thousand.

As I remember, in 1939, between nine and eleven hundred.

In 1940 I guess we made 25.

Q. What happened to your business during the war time? A. Well, when the war broke out in 1939, the tobacco market closed up. The price of tobacco went down. We had sold the curers to different farmers.

In July, 1940, the old corporation, Smith Heating System, Incorporated, was thrown into bankruptcy.

In November, 1940, we reorganized a Smith Heating, Incorporated, but we had practically no market for our curers. In 1941 we had practically no market for our curers until after the tobacco market had opened in the fall, and then only a very small market.

I would estimate that in the fall of 1941 I may have sold 25 curers—maybe 25 in the year. I am estimating that. I think it is a fair estimate. That was in 1941.

In 1942 I was unable to get priority numbers, although they did give me a priority for 300 curers in late December, 1941, and early 1942, but with the numbers they gave me I could not buy a piece of material in the year 1942.

The only business I could do was to buy second hand curers and re-sell them, and sell a few wicks. Consequently, I was broke, or practically so.

In the beginning of 1943 they changed the priority regulation and gave me a priority for one oil burning curer a month, which sold for $110.

Q. How many did you say a month? A. One. About the middle of 1943 they increased that and gave me two a month.

About the last of 1943, some time in late December, I was called up one day, over a long distance phone call from Washington—I thought I had done something wrong—

The Court: What happened?

By Mr. Morton:

Q. When was this? What happened when they called you up? A. They gave me a priority for 300 curers.

Q. That was in 1943? A. In 1943. Excuse me just a minute.

The Court: We will take a recess.

(A short recess was had.)

By Mr. Morton:

Q. What has been the situation, since 1943, as regards material for manufacturing your curers? A. I estimate that we turned away 25,000 sales last season because we could not get the material to make them.

Mr. Morton: I think that is all.

Mr. Schimmel: No cross examination, your Honor.

Herbert T. Kornegay, being first duly sworn, deposes and says:

Direct Examination.

Q. Mr. Kornegay, what is your full name, age and present post office address? A. Herbert T. Kornegay, Route No. 2, Box 165, Mount Olive, North Carolina; I live in Duplin County.

Q. In what business are you engaged? A. Farming.

Q. How long have you engaged in the business of farming? A. All my life.

Q. What crops do you produce and have you produced during your experience as a farmer? A. Corn, cotton, tobacco, cane, peanuts and anything that is produced in this part of the country; have actually produced rice just as an experiment, and have raised right many hogs.

Q. How long have you produced tobacco? A. Ever since I can remember it has been produced on the place.

Q. What method of curing tobacco was used when you began to produce tobacco? A. Wood, used wood for fuel.

Q. Do you mean that you used wood in a furnace and flue equipped barn? A. Yes, sir, that is the only way I had ever known it used.

Q. Will you describe the type of furnace used in curing tobacco at the time you began to produce it. A. A long furnace usually built of brick extending from the outer wall of the tobacco barn and extending the length of the barn, with a fire space about 16 x 18 inches extending the length of the furnace and with vents on either side of the hollow furnace in which metal flues made of sheet iron about 12 inches in diameter were fitted, which flues extended from the furnace in each direction along the inner walls of the barn a distance of 15 or 18 inches from said walls and joined immediately over the front end of the furnace on the inside of the barn, from which point the flues projected through the wall of the barn and were either extended to the side or above the roof of the said barn forming on the outside of the barn a smoke-stack; the fire is placed in the furnace from the exterior of the barn and the smoke and heat from the fire extend through the furnace including the flues, creating a type of circulating heat in the barn and passes through the flues and out through the portion referred to as a smoke stack.

Q. State whether or not you personally cured or supervised the curing of tobacco in a barn or barns equipped with the furnace and flue system you have just described? A. Yes, I have operated them myself; have three operating this year.

Q. About how long ago was it when you first began to use the type of furnace you have just described? A. Approximately 40 years.

Q. When did you first see an oil burning tobacco curing unit or outfit? A. About 1934 or 1935, have been using one eleven or twelve years.

Q. What type of oil burning unit did you purchase in 1934 or 1935? A. It was a Smith A Model, open flame curer.

Q. I hand you what purports to be a copy of Patent No. 2051348, issued to Forest H. Smith, and ask you to look at the curer described in this document and state whether or not it is the type of curer you purchased and used in your tobacco barn in the curing of green tobacco beginning with 1934 or 1935? A. Yes, this is the same curer.

Q. Mr. Kornegay, what advantage, if any, did you experience in the use of Smith's Oil Burning Tobacco curing system as compared with your use of the furnace and flue system you have heretofore described? A. I find the advantage in it that it saves money, the oil doesn't cost as much as cutting wood and gives me about three days extra work to do elsewhere in barning tobacco and in looking after other places, and it brings me more money. I have a better grade of tobacco and it stays in order better.

Q. What about the quality of the tobacco? A. The quality is better.

Q. Is there, or not, any difference in the color? A. I think it has a better color.

Q. You referred to saving time, do I understand you to mean by that that the Smith Oil Burning Tobacco Curing System is a labor saving device in its practical use in curing tobacco? A. Yes, sir, I know it is.

Q. As compared with the curing of tobacco with the furnace and flue system? A. Yes, sir. It saves a whole lot.

Q. State whether or not you have made tests in your effort to determine whether or not there was a difference in the sale value of the tobacco cured by the Smith Oil Burning System as compared with the same type tobacco cured through the use of the furnace and flue system? A. I made that test, it was along I reckon about 1935 or 1936, the next year after I got the curer and it run something like 10%; it won't run that heavy every time, but it did that time; that is what the test showed.

Q. Which was the more valuable? A. The one cured with oil brought more money.

Q. Have you ever heard of an oil burning tobacco curing system prior to the time when you purchased the Smith System? A. None but the Smith; I had heard it talked, never had heard of any but the Smith.

Q. In which tobacco belt do you live? A. In the Eastern or Bright Belt.

Q. How many burners do you have installed in your barns in which the Smith System is installed? A. I have got two Smith curers, one with 22 units and the other 24 units.

Q. Is there or not any difference in the uniformity of the heat as produced by the Smith Oil Burning System in comparison with the heat produced by the flue and furnace equipment? A. Yes, sir, it is more uniform with the Smith Oil Burning System.

Q. Is there or not, an advantage in the curing of green tobacco to maintain a sustained heat? A. Yes, sir, it is better when it does that, the Smith's will keep it going; regular heat will cause tobacco to dry out quicker.

Q. What effect does the maintenance of irregular heat in the curing of tobacco have upon the quality and texture of the product? A. It just doesn't sell as well when it is circled. When the heat drops the juice runs back in the dry part of the leaf and circles or stains the tissue and this adversely affects the sale value of the tobacco. If steady heat is maintained this stain does not occur.

Q. Mr. Kornegay, in your experience in curing tobacco through the use of the Smith's curer, and also with the furnace and flue system, is there or not any difference in the weight of the tobacco? A. It weighs more cured with the Smith Oil Furnace, that is my experience. I tested it one time.

Q. How much difference would you say there is in the weight of a barn of tobacco cured through the use of the Smith Oil Burning curer and that cured by flue and furnace? A. I would say the tobacco cured with the oil burner would weigh 5% more.

Respectfully submitted,

HEBERT T. KORNEGAY.

Sworn to and subscribed before me,
this February 12, 1947.

MOLLIE V. HART,
Notary Public.
My commission expires July 4, 1947.
(Seal.)

G. S. GILLIAM, being first duly sworn, deposes and says:

DIRECT EXAMINATION

Q. What is your name, post office address, age and county of your residence? A. G. S. Gilliam, Louisburg, North Carolina, Route No. 2; age 56 years, and I live in Franklin County.

Q. In what business are you engaged? A. Farming.

Q. Do you or not, produce tobacco, Mr. Gilliam? A. Yes, sir.

Q. How long have you been engaged in raising tobacco? A. All my life, ever since I have been big enough to work any.

Q. What method of curing tobacco was used in your community when you first began to raise tobacco or to work in it? A. With furnace, flues and wood.

Q. Have you used any other type of curing system? A. The Smith open flame oil burning tobacco curer.

Q. When did you begin to use the Smith open flame oil burning tobacco curer? A. In 1940.

Q. How many systems do you have? A. Just two; I run a small farm, two barns and one in each barn.

Q. Is there any difference, Mr. Gilliam, in the quality of tobacco cured with the Smith open flame oil burning tobacco curer as compared with that cured in a barn equipped with the furnace and flue wood burning system? A. There is, yes, sir.

Q. Will you explain the difference as you have observed it in your experience? A. Well, the Smith open flame curer cures tobacco with a finer texture; you can feel of it with your hand and it is softer and feels different than that cured with wood, cures with more uniform cure all over the barn, weighs heavier and brings more per pound.

Q. As I understand it, Mr. Gilliam, your experience is that the tobacco cured with the Smith open flame oil burning curing system has a greater commercial value? A. It does.

Q. Mr. Gilliam, you referred to the fact that tobacco cured through the use of the Smith open flame curing system had a better texture than tobacco cured in a barn equipped with furnace and flues, will you explain what produces that difference, in your opinion? A. Well, in my opinion, it is the difference in the temperature; the Smith's open flame tobacco curer, when you turn on your oil to what we call kill the leaf, it begins to go gradually up a little at the time, as the leaf dries the heat continues to move on up and keeps the sap pushing up and doesn't drop down and let it fall and it doesn't ever get to such a high temperature that it burns the tobacco, just a good, smooth even cure all the way through.

Q. In other words, as I understand it Mr. Gilliam, the even sustained heat produced through the use of the Smith system cures the tobacco in such a manner as not to damage the tissue? A. That is right.

Q. What has been your experience in reference to the comparative weight? A. It has decidedly better weight; I don't know the percentage, but it has decidedly better weight cured with Smith oil burning tobacco curer.

Q. What has been your experience in reference to the labor saving in the use of the Smith open flame oil burning tobacco curer as compared with the furnace and flue system? A. It saves me practically 100% in my labor curing. It doesn't take any of my time to amount to anything to cure with it.

Q. When you refer to 100% in your labor cost of curing, you have reference, as I understand it, to the curing process after the tobacco has been put into the barn? A. That is right.

Q. Is there, or not, any saving in the length of time required to cure a barn of tobacco with the Smith open flame curing system as compared to the furnace-flue system? A. Yes, sir, there is a saving in the time. It will kill a barn of tobacco out a little earlier. After it has been tried and you stop the fire the barn cools off and permits your tobacco to become what we call in order so that you can take it out earlier.

Q. To what do you attribute the difference in time within which the tobacco will come in order after it is cured? A. The fact that the Smith oil burning tobacco curer maintains a steady heat at all times and never lets the heat down and it kills out quicker, the heat holds even; if you were curing with wood you would put in a stick of wood and would leave and come back and the heat would be down and take a while to build it back to where you had it.

Q. What effect does the fluctuation of the temperature in the curing barn have upon the tobacco during the curing process? A. If it varies up and down it will cause the tobacco to mottle, or sponge or circle. It makes a darker and inferior grade of tobacco.

Q. What effect does the condition you have just described as resulting from the fluctuation of the temperature have upon the commercial value of the tobacco? A. It lessens the commercial value, brings less per pound.

Q. Have you heard of, had any knowledge of, any oil burning tobacco curer prior to the time when you heard of and subsequently purchased the Smith open flame curing system? A. No, sir, Smith's open flame curer was the first one I heard of and I heard of that sometime before I bought one.

Q. Mr. Gilliam, what about the comparative difference in fire hazard between the Smith open flame oil burning tobacco curer and the flue and furnace system? A. It is far less hazardous when cured with Smith's curer than it is when cured with fire and wood furnaces.

Q. Will you explain how that difference is brought about? A. I think the biggest thing about it is that there is never concentration of so much heat at one point; in the wood furnace all the heat in it has to go through one flue and that gets red hot for a considerable distance around. If a leaf of tobacco were to fall on that it would ignite and cause a fire; whereas, the Smith's oil burning tobacco curer has no exposure to the flame so that a leaf might ignite even if the leaf fell on it.

Q. Do you, or not, Mr. Gilliam, have reference to the baffle plate which is placed over each burner? A. Yes, the hood or baffle plate; we call it a hood.

Respectfully submitted,

G. S. Gilliam

Sworn to and subscribed before
me, this February 12, 1947.

Mollie V. Hart
Notary Public
My Commission expires July 4, 1947.
(Seal)

Onnie Mercer, being first duly sworn, deposes and says:

Direct Examination

Q. What is your name, please? A. Onnie Mercer.

Q. Where do you live? A. In Bailey, North Carolina.

Q. What County? A. Nash County, North Carolina.

Q. What tobacco belt? A. Eastern Carolina or Bright Leaf Tobacco Belt.

Q. Did you ever use a Reynolds kerosene tobacco curer? A. No, I never used one. I took the one my brother had and tried to get it unchoked, but I never could get it to burn.

Q. Did you hear your brother, S. B. Mercer, in his deposition, given today, describe the burner which he said was called the Reynold's burner? A. Yes, sir.

Q. Do you agree with that description? A. It is just about as he described it.

Q. Are you familiar with the efforts of your brother to cure, I believe he said, three barns of tobacco with the Reynolds curer? A. Yes.

Q. Do you know whether or not he was able to cure the tobacco in those three barns successfully? A. No, he was not.

Q. Did you see the tobacco that was cured with the Reynolds burner? A. Yes.

Q. What would you say as to its quality? A. It looked poor, and had a bad color and was mottled; I would say the heat had gone down on it.

Q. Would you say he was not able to cure tobacco with that burner as well as he could with other systems? A. No, I don't think he could cure as well with that burner as he could with other systems.

Q. Was this same type of Reynolds curer used by any others in your section? A. I heard of one more in Wilson

County, but did not see it; they didn't keep it very long, just for a short while.

Q. After the Reynolds burner, what was the next oil burner that you heard of? A. The Smith.

Q. That is the Smith open flame oil burner that you refer to? A. Yes.

Q. Have you used the Smith? A. Yes, I have nine sets.

Q. How long have you used them? A. Since 1936.

Q. Each burner or set of burners consist of a number of separate units? A. Yes.

Q. About how many units in nine barns? A. From 19 to 30 units in each barn. I have one barn with 19 units, I think; and one or two barns with 30 units; the number of units depends on the size of the barn.

Q. These burners that you have just spoken of, you use in your own barns. A. Yes.

Q. What results have you obtained in the use of the Smith burner as to quality of tobacco? A. Better color, heavier, more life, and really sells for more money.

Q. That is, you mean to say, that tobacco cured in the open flame type burner is better colored, heavier, and sells for a better price than tobacco cured by the old type wood burning furnace? A. That's right.

Q. Does the use of Smith open flame oil burner save any labor? A. Yes, sir. On my place we don't lose any time in curing tobacco.

Q. Does the Smith open flame oil burner cure tobacco any faster than the wood burning, flue equipped, type of barn? A. Yes. In using wood it took a week to cure a barn to tobacco, and with oil burners you can cure three barns in two weeks.

Q. Are you able to maintain a more even temperature throughout by using the Smith open flame oil burner? A. Yes, I hardly ever find a place that is not killed out in using the Smith oil burner, while in wood curing I could find places that were not killed out.

Q. Why is it hard to maintain uniform heat using the wood burning furnace? A. I should imagine because your fire is all in one place and heat does not circulate; and in the oil burner the units are all over the barn and the heat circulates. In the wood furnace the heat is going up or down and in the oil burner it is a regular heat.

Q. What effect does this lack of uniformity in heat have on the tobacco in the way of discoloration? A. You mean what difference in the color?

Q. Yes. A. Well we call it mottly or circled when the heat goes up and then comes down, it causes it to circle.

Q. Do you have that circling you mention, or the discoloration, when you use the Smith open flame oil burner? A. No.

Q. Is that because of the even temperature? A. Yes, because the heat never drops back.

Respectfully submitted,

ONNIE MERCER.

Sworn to and subscribed before
me this February 12, 1947.

MOLLIE V. HART,
Notary Public.
My commission expires July 4, 1947.
(Seal)

Tommie S. Langdon, being first duly sworn, deposes and says:

Direct Examination

Q. Mr. Langdon, what is your name, age and Postoffice address? A. Tommie S. Langdon, forty-four years old, Benson, Johnston County, North Carolina.

Q. In what business are you engaged? A. Farming.

Q. Do you or not produce tobacco? A. Yes, sir.

Q. How long have you been engaged in the production of tobacco? A. Well, frankly, all my life—twenty-four years for myself.

Q. What was the method of curing tobacco when you first began to work in it or produce it? A. Wood and flue.

Q. Wood used in the furnace and flue system? A. Yes, sir.

Q. Have you at any time used the Smith Open Flame Oil Burning System in curing tobacco? A. Yes, sir.

Q. When did you first use the Smith Open Flame System? A. 1935.

Q. Is there any difference in the tobacco cured through the use of the Smith Oil Burning Open Flame System as compared with tobacco cured with the furnace and flue system? A. Yes, there is a difference.

Q. What is that difference, Mr. Langdon? A. Well, the tobacco cured with the oil system is of a better texture and a better color.

Q. What of the quality, Mr. Langdon? A. I would say it is a better quality because it is a regular heat.

Q. From your experience in curing tobacco, and using both the flue and furnace system, and the Smith Open Flame Oil Burning System, state whether or not it is an advantage to be able to maintain a sustained heat? A. Yes, it is.

Q. How does the maintenance of a sustained heat affect the quality and sale value of the tobacco? A. It prevents sponging or discoloring of the tobacco; it doesn't destroy the texture of the leaf and when the curing is completed the tobacco has more life and body and it sells for a better price.

Q. Mr. Langdon, state whether or not you can maintain a more uniform and sustained heat in the curing barn through the use of the Smith Open Flame Oil Burning Curer than you can in one equipped with the furnace and flue system? A. Yes, sir.

Q. What advantage, if any, is there in the use of the Smith Open Flame Oil Burning System over the use of the flue and furnace system in the labor or expense of housing and curing tobacco? A. Well, you can save the labor of one man.

Q. In what manner does it save the labor of one man, Mr. Langdon? A. In the use of the flue and furnace system one man is required to look after the curing and it takes practically his entire time, whereas if you use the oil system only casual attention is necessary, and the person looking after it can do as much work either in the gathering and bringing of the tobacco to the barn as he could if he were not looking after the system.

Q. Which was the first oil burning system you ever heard of or had any knowledge of, Mr. Langdon? A. Smith's.

Q. Do you mean the Smith Oil Burning Open Flame System? A. Yes, sir.

TOMMIE S. LANGDON.

Sworn to and subscribed before me
this the 12th day of February, 1947.

MOLLIE V. HART,
Notary Public.
My commission expires July 4, 1947.
(Seal)

B. C. HINSON, being first duly sworn, deposes and says:

DIRECT EXAMINATION

Q. Mr. Hinson, what is your name, postoffice address, age and county of your residence? A. B. C. Hinson, Loris, South Carolina, Horry County, Age 47.

Q. In what business are you engaged, Mr. Hinson? A. Farming.

Q. State whether or not you, among other crops, produce tobacco? A. Yes, sir.

Q. How long have you been producing tobacco? A. Around thirty years.

Q. In what tobacco belt do you live and produce tobacco? A. In the Border Belt.

Q. Is that or not one of the belts in which the tobacco produced is cured in tobacco curing barns? A. Yes, sir.

Q. What method of curing tobacco was being used when you first began to work in and to assist in the production of tobacco? A. Wood with flues.

Q. Do I understand you to mean furnace and flue system? A. Yes, sir.

Q. Wood was used as fuel? A. Yes, sir.

Q. Mr. Hinson, have you had occasion to use an oil burning system? A. Yes, sir.

Q. What system do you use? A. The Smith Open Flame Oil Burning System.

Q. How long have you used this Smith Open Flame Oil Burning System? A. I have cured twelve crops with it.

Q. That means that you have used that system for twelve years? A. Yes, sir.

Q. How many curers do you have, Mr. Hinson? A. Five.

Q. What units make up each of the five curers? A. Twenty to twenty-four.

Q. From your experience in curing tobacco through the use of the flue and furnace system, and also with the Smith

Open Flame Oil Burning System, will you state whether or not there is a difference in the result obtained in the use of the two systems? A. Yes, sir. My experience is that tobacco is heavier and you get more of the best grade of tobacco which sells for the highest price with the Smith curer than you do with wood. I can give you a little experience here that I had: When we were curing with wood, when we get our first priming, all the leaves that is partly burned we throw them away, and the first year I used the open flame curer my little daughter picked up a bunch of the leaves and strung them and wanted me to cure them. With wood we would throw that tobacco away, but we cured it with the oil system and it went right along with the regular grade as a good grade of trash tobacco.

Q. From your experience in using both systems, is there any difference in the coloring, quality and texture of the tobacco? A. Well, my experience in curing with wood, about an inch around the leaf of the tobacco the leaf was soft, and on up next to the stem it was paper where the heat had dried the life out of it. With the oil it had the same texture on up to the stem.

Q. Mr. Hinson, what, if any, would you say is the difference in the sale value of the tobacco cured through the use of the Smith Open Flame Oil Burning System as compared with tobacco cured through the use of the flue and furnace system? A. From three to five cents average on the pound more curing with oil than with wood.

Q. To what do you attribute that difference in sale value of the tobacco, Mr. Hinson? A. To the uniform heat.

Q. Will you explain, please, the difference between the two systems in your ability to maintain a uniform heat in curing tobacco? A. That your heat varies in different parts of the barn from 10 to 30 degrees with a furnace, and with the oil it is the same thing all over the barn.

Q. Do I understand you to mean, Mr. Hinson, that through the use of the Smith Open Flame Oil Burning

System you are able to maintain a uniform heat in the barn? A. Yes, sir. No cold corners.

Q. Mr. Hinson, state whether or not the maintenance of a uniform sustained heat in the process of curing tobacco for commercial purposes produces a better quality product? A. Yes, sir.

Q. Do you mind explaining what effect the maintenance of irregular heat in the curing process affects the tobacco? A. The irregular heat lowers the grade of the tobacco. When the heat drops it makes a difference in the leaf of the tobacco; it changes the color, and then when the heat dashes back up it runs the tobacco red. This is caused by the heat varying up and down with the flue and furnace system in which wood is burned.

Q. Mr. Hinson, what advantage, if any, is there in the use of the Smith Open Flame Oil Burning Curing System as compared with the flue and furnace system in the labor required? A. Well, with the flue and furnace system it takes one man steady at the barn twenty-four hours a day to cure, and with the oil system about thirty minutes per day.

Q. Do I understand you to mean by that, Mr. Hinson, that the person curing the tobacco with the use of the Smith Oil System is only required to give about thirty minutes per day time and attention to the curing of the tobacco? A. Yes, sir. Some days it don't take any, but will run on an average of thirty minutes per day.

Q. This also means, does it not, that the tobacco curer is free to engage in any other type of employment, including assisting in the gathering and bringing of the tobacco to the barn for curing purposes? A. Yes, sir. A sharecropper could take more crop by using the Smith Open Flame Curing System.

Q. Which oil burning tobacco curing system did you first hear of, Mr. Hinson? A. I don't know the name of it. There was one ahead of Smith's.

Q. Did you see the one that you had heard of before you heard of the Smith Open Flame System? A. No, sir.

Q. You didn't see it? A. No, I didn't see it while it was in the barn.

Q. Where was it when you did see it? A. Out in the edge of the woods.

Q. Will you describe it, please? A. About all I can remember, it was a big pile of tin. Just one large unit.

Q. Did you talk to the person who purchased that unit and undertook to use it in curing tobacco? A. Yes, sir.

Q. What did he tell you, if anything, with reference to whether or not it could be successfully used in the curing of green tobacco? A. He said it was a failure; that he put it in the barn and it wouldn't work and he took it out.

Q. Was that the only one you have ever heard of prior to the time you heard of and began to use the Smith Open Flame Oil Burning System? A. Yes, sir.

B. C. Hinson.

Sworn to and subscribed before me
this the 12th day of February, 1947.

Mollie V. Hart,
Notary Public.
My commission expires July 4, 1947.
(Seal)

JIM SMITH, being first duly sworn, deposes and says:

DIRECT EXAMINATION

Q. Mr. Smith, what is your name, age, postoffice address and county of your residence? A. Jim Smith, Nakina, Columbus County, North Carolina, age thirty-six.

Q. In what tobacco belt do you live, Mr. Smith? A. The Border Belt.

Q. In what business are you engaged? A. Well, farming mostly.

Q. State whether or not you produce tobacco? A. Yes, sir, I produce tobacco.

Q. How long have you been engaged in the production of tobacco? A. Twenty-five years.

Q. What method of curing tobacco was being used when you first began to work in its production? A. Furnace and flues.

Q. Have you used the Smith Open Flame Oil Burning Curing System? A. Yes, sir.

Q. When did you first begin to use this system? A. 1937.

Q. How many curers do you own and operate? A. Three.

Q. From your experience in using both the flue and furnace system and the Smith Open Flame Oil Burning System, what would you say as to whether or not there is a difference in the tobacco cured by the oil system as compared with the tobacco cured by the furnace and flue system. A. Well, I think there is some difference because that when you use the Smith System the heat will not go up until the moisture leaves the barn so that it will not scald the tobacco. Therefore, that is the reason why that oil burning devices is better than wood. No man can't tell curing with wood just how fast to rush his heat.

Q. Do I understand, Mr. Smith, you to mean by what you have said that in the process of curing tobacco and through the use of the Smith Open Flame Oil Burning System the heat is increased or rises in the tobacco curing barn as the green tobacco dries? A. That's right.

Q. State whether or not it is an advantage to maintain a sustained heat in the process of curing green tobacco from the beginning and extending through to the point that the leaf or barn of tobacco is completely dry or cured? A. Yes, sir.

Q. Mr. Smith, will you explain, please, the difference in quality of tobacco cured in a barn in which uniform sustained heat is maintained as compared with the same tobacco cured in a barn in which irregular heat is maintained? A. Well, with tobacco that is cured with oil it will grade out better. There will be more tobacco that will go in your top grades. There will be more tobacco that has got good color and good texture than there will with the tobacco that is cured with wood because of the uniform sustained heat.

Q. Mr. Smith, you refer to the oil system. State whether or not you were actually referring to the Smith Open Flame Oil Burning System? A. Yes, sir.

Q. What effect does irregular heat have in the curing of the tobacco? A. It will cause the tobacco to sponge and go to trash.

Q. In the use of the word "sponge", is that the same as stained? A. That's right.

Q. Mr. Smith, state whether or not tobacco cured through the use of the Smith Oil Burning Open Flame system is a better quality product than that which results from the use of furnace and flue system? A. Yes, I feel like it is.

Q. Would the tobacco cured with the oil system to which you have referred have as good or better sale value than that cured with furnace and flue system? A. Yes, it has a better sales value.

Q. Mr. Smith, whose open flame oil burning tobacco curing system did you first have knowledge of? A. Mr. Forrest H. Smith.

Q. Had you heard of any other oil burning tobacco curing system before you heard of Mr. Forrest H. Smith's open flame oil burning system? A. Not that I remember of.

Q. Are you related by blood, or connected by marriage with Mr. Forrest H. Smith? A. No, sir.

JIM SMITH.

Sworn to and subscribed before me
this the 12th day of February, 1947.

MOLLIE V. HART,
Notary Public.
My commission expires July 4, 1947.
(Seal)

W. S. HOLT, being first duly sworn, deposes and says:

DIRECT EXAMINATION

Q. Will you state your name, age and residence, please? A. W. S. Holt, South Boston, Virginia, 57 years of age.

Q. What tobacco belt is that in? A. In the Old Bright Belt.

Q. What is your occupation? A. I am in the tobacco business and farming.

Q. How many years have you been in that business? A. I have been supervising sales in South Boston for fourteen or fifteen years.

Q. Do you operate a farm or farms? A. Yes, sir.

Q. Are you familiar with the old system of curing tobacco by furnace and flues? A. Yes, sir, I guess so, they were curing that way when I was a boy.

Q. You cured a good many barns that way? A. Yes, sir, I was raised on a farm that didn't know any other way to cure it.

Q. When did you first learn of the Smith open flame oil burning system of curing tobacco? A. I think my first experience was in 1937, 1936 or 1937.

Q. Did you buy some of the Smith open flame equipment at that time? A. No, sir, I operated it in a barn just out of town.

Q. Was this Smith system the first oil burning system that you knew of? A. Yes, sir.

Q. Based on your observation and experience, Mr. Holt, what would you say as to the quality of tobacco that is cured by the Smith's open flame system as compared with the quality cured by the old furnace and flue system? A. My experience has been that it very definitely is of better quality.

Q. Cured by which one? A. With the Smith curer. The color is clearer, the tobacco has more of what we call body, more life and on numerous and numerous occasions we tried it to see if it weighed more and it does when cured with the Smith open flame curer.

Q. Of the two systems, which maintains the more even heat in the curing process? A. The Smith curer, very definitely so; that has a continuous rise of heat from the time that the leaf begins to dry, whereas the other heat with the old flue system wood burning is up and down and causes the tobacco to sponge, and when it gets too hot causes it to scald and then it causes it, in some cases when it gets extremely hot, to bake or brown the tobacco.

Q. So the uniformity of the heat does have a good effect on the quality of the tobacco? A. Yes, sir.

Q. Could you say whether or not tobacco cured by the Smith system which has been described above brings a better price than tobacco cured in the old furnace and flue system? A. Our experience definitely was that the tobacco sold for more money.

Q. Does the Smith system save any labor cost as compared with the furnace and flue system? A. The Smith curer saves nearly 100% of your labor in curing tobacco, because there is practically nothing to do after you once light the burners and then lighting the burners is all the work there is to it.

Q. Does the Smith system cure tobacco faster than the old system? A. Our experience is from six to ten hours earlier than the same tobacco would cure with wood.

Q. Mr. Holt, have you ever heard of the Reynolds or Brock oil burning tobacco curers? A. No, sir, I have not.

Respectfully submitted,

W. S. Holt.

Sworn to and subscribed before me,
this February 12, 1947.

Mollie V. Hart,
Notary Public.
My commission expires July 4, 1947.
(Seal)

J. H. Harris, being first duly sworn, deposes and says:

Direct Examination

Q. Mr. Harris, where do you live? A. In Farmville, Pitt County, North Carolina.

Q. What is your occupation? A. I am a merchant and own farms.

Q. Do you operate and supervise the operation of your farms? A. I look after them.

Q. Are you familiar with the curing of the tobacco on your farms. A. I am familiar with the curing.

Q. It has been done under your supervision and you are thoroughly familiar with it? A. Yes, sir.

Q. Were you familiar with the old system of curing tobacco in barns with wood furnace and flue equipped? A. Yes, sir.

Q. Are you also familiar with the curing of tobacco by the use of Smith's open flame oil type burners? A. Yes, sir.

Q. Have you used some of the Smith open flame burners on your farms? A. Yes, sir.

Q. When did you first learn of the Smith open flame burners? A. I suppose around 1933 or 1934.

Q. Were the Smith open flame curers the first oil burning curers you knew to be used? A. The first I knew.

Q. As far as you know, Mr. Smith was the first person to manufacture and sell the oil burning tobacco curer. A. Yes, the first I ever knew of.

Q. Mr. Harris, from your observation in curing tobacco by both systems, that is the wood burning furnace with the flues and the Smith open flame oil burning heaters, have you noticed any difference in the appearance of the tobacco cured by those systems? A. Well, I have not seen as much damaged tobacco cured by the open flame curer systems as I have by the wood curing system.

Q. How many Smith open flame curers do you have? A. I have as many as twenty or twenty-five.

Q. You have them installed in twenty or twenty-five barns? A. Yes, sir.

Q. In each of these barns how many units do you have? A. In some barns there are 20 and some 30, from 20 to 32 units in each barn.

Q. State whether or not, in your opinion, tobacco cured by the Smith open flame oil burner is more uniform in color than tobacco cured by wood burning barns? A. Yes, sir. In my opinion it is.

Q. Have you an opinion satisfactory to yourself as to whether the quality of tobacco cured by oil burning open flame curers is better or worse than that cured by wood burners? A. I would say better.

Q. Do the open flame oil burners keep a more uniform heat in the barn, in your opinion? A. Yes, sir.

Q. What do you say as to the texture of the tobacco cured by the Smith open flame oil burner and that cured in wood furnace barns? A. It has more life in it. It works better. The life doesn't seem to dry out as it does in wood furnace cured tobacco.

Q. Mr. Harris, does the use of Smith open flame oil burners save any labor as compared to wood? A. Yes, sir.

Q. How much? A. It enables the curer to save a man's work, whereas, in the wood curing barn it requires one person to look after it. Smith open flame oil burners can be operated with casual attention, and the person operating it is free to engage in other work incident to the barning of the green tobacco.

Respectfully submitted,

J. H. Harris.

Sworn to and subscribed before me,
this February 12, 1947.

Mollie V. Hart,
Notary Public.
My commission expires July 4, 1947.
(Seal)

James H. Gray, being first duly sworn, deposes and says:

Direct Examination

Q. Mr. Gray, give your full name, post office address, age and county of your residence, please. A. James H. Gray, Robersonville, Martin County, North Carolina, and I am 48 years of age.

Q. In what business are you engaged? A. Tobacco business and farming.

Q. State whether or not you produce tobacco as a part of your farming operation? A. Yes, sir, I do.

Q. How long have you been engaged in the production of tobacco? A. Seventeen years.

Q. What type of curing system was used when you began to work in the production of tobacco? A. Old style wood furnace and flues.

Q. Have you used any type of oil burning curing system? A. Yes, sir.

Q. What type? A. Smith Open Flame Oil Burning Tobacco Curer.

Q. When did you begin to use the Smith Open Flame Oil Burning Tobacco Curer? A. I don't know exactly, but approximately ten years ago.

Q. Is there any difference Mr. Gray, in the quality of tobacco cured with the Smith Open Flame Oil Burning Tobacco Curer as compared with the tobacco cured with the furnace and flue system? A. Yes, sir, there is a great deal of difference from several angles; the tobacco has a better texture, has more weight, it holds its oil and consequently sells better on the market.

Q. You mean by that that the tobacco cured with the Smith system possesses the advantages you have just related? A. That is right.

Q. From your experience in curing tobacco Mr. Gray, is there or not, an advantage in maintaining in the tobacco

Appendix.

JAMES H. GRAY, being first duly sworn, deposes and says:

DIRECT EXAMINATION

Q. Mr. Gray, give your full name, post office address, age and county of your residence, please. A. James H. Gray, Robersonville, Martin County, North Carolina, and I am 48 years of age.

Q. In what business are you engaged? A. Tobacco business and farming.

Q. State whether or not you produce tobacco as a part of your farming operation? A. Yes, sir, I do.

Q. How long have you been engaged in the production of tobacco? A. Seventeen years.

Q. What type of curing system was used when you began to work in the production of tobacco? A. Old style wood furnace and flues.

Q. Have you used any type of oil burning curing system? A. Yes, sir.

Q. What type? A. Smith Open Flame Oil Burning Tobacco Curer.

Q. When did you begin to use the Smith Open Flame Oil Burning Tobacco Curer? A. I don't know exactly, but approximately ten years ago.

Q. Is there any difference Mr. Gray, in the quality of tobacco cured with the Smith Open Flame Oil Burning Tobacco Curer as compared with the tobacco cured with the furnace and flue system? A. Yes, sir, there is a great deal of difference from several angles; the tobacco has a better texture, has more weight, it holds its oil and consequently sells better on the market.

Q. You mean by that that the tobacco cured with the Smith system possesses the advantages you have just related? A. That is right.

Q. From your experience in curing tobacco Mr. Gray, is there or not, an advantage in maintaining in the tobacco

Q. What difference, if any, is there in the labor cost in curing tobacco with the Smith Open Flame System as compared with wood? A. You can practically do away with the labor bill when you cure with the Smith curer, and you don't have that long sitting up, and it makes a man so that he can work the next day; when curing with wood you can't work night or day very much.

Q. Mr. Gray, had you heard of any other oil burning tobacco curing system prior to the time you heard of the Smith Open Flame Oil Burning System? A. No, sir, so far as I know and have heard, that is the first one that was put out; I know it was in our country.

Respectfully submitted,

JAMES H. GRAY.

Sworn to and subscribed before me
this February 14, 1947.

MOLLIE V. HART,
Notary Public.
My commission expires July 4, 1947.
(Seal)

P. H. Brown, being first duly sworn, deposes and says:

Direct Examination

Q. Will you state your name for the record? A. P. H. Brown.

Q. Where do you live? A. Williamston.

Q. What County? A. Martin.

Q. Is that in what is known as a tobacco belt? A. Yes, sir, the Eastern Bright Leaf Tobacco Belt.

Q. What is your occupation? A. A little of everything, including farming, at present am a salesman.

Q. Were you reared on the farm, Mr. Brown? A. Yes, sir.

Q. Have you farmed and grown tobacco, and cured tobacco during your life time? A. I have raised tobacco and cured some.

Q. Have you supervised the curing of tobacco and have you supervised the curing by tenants on your farm? A. Yes, sir.

Q. Were you familiar with the method of curing tobacco by the use of flues and furnaces burning wood as fuel. A. Yes, sir.

Q. Have you cured tobacco, or supervised the curing of tobacco, on your farms using that method? A. Yes, sir.

Q. Are you also familiar with the Smith open flame oil burning type of tobacco curer? A. Yes, sir.

Q. State whether or not you have from time to time seen a great many of the Smith open flame oil burning curers in operation? A. Yes, sir, I have.

Q. Did you say, or would you say that you are thoroughly familiar with their operation. A. I should think so.

Q. From your experience and observation with the wood burning type of furnace, flue equipped, and with the Smith open flame oil burning type of curer, have you an opinion satisfactory to yourself as to which type of curer produces the best quality of tobacco? A. Yes, sir, Smith's or the open flame, practically the same thing.

Q. What are your reasons for that Mr. Brown? A. I saw tobacco taken out of the barns, one cured with oil burners and one cured with wood, and the one cured with the oil was much better than that cured in the wood burning barn.

Q. Were the oil burners that were used in curing that tobacco Smith's open flame oil burners? A. Yes, sir.

Q. What do you say as to the color of the tobacco that was cured on that occasion? A. I couldn't tell you the difference in curing, but the oil cured tobacco was of better color and texture.

Q. Did you actually observe the tobacco that had been cured by the Smith Oil burners and the tobacco that had been cured by the wood burners, and could you tell the difference in its appearance from an actual inspection? A. Yes, sir.

Q. What was the difference in the tobacco cured by the oil burner and that cured in a wood burning barn? A. That cured by oil burner was of better texture and better color.

Respectfully submitted,

P. H. Brown.

Sworn to and subscribed before me
this 12th day of February, 1947.

Mollie V. Hart,
Notary Public.
My commission expires July 4, 1947.
(Seal)

J. M. ADAMS, being first duly sworn, deposes and says:

DIRECT EXAMINATION

Q. Mr. Adams, what is your name, age, post office address, and the county of your residence? A. J. M. Adams, age 33, Merry Hill, Bertie County, North Carolina.

Q. In what business are you engaged, Mr. Adams? A. Farming, mostly.

Q. Do you produce tobacco? A. Yes, sir.

Q. How long have you been engaged in the production of tobacco? A. About twelve years.

Q. What system or method of curing tobacco was being used when you began to produce tobacco? A. I used wood fired furnaces with flues.

Q. State whether or not you have used any other type or method of curing tobacco? A. Yes, sir.

Q. What method have you used? A. I have used the Smith open flame tobacco curer, oil burning.

Q. When did you begin to use the Smith oil burning tobacco curer? A. In 1939.

Q. What difference, if any, have you observed in the quality of tobacco cured through the use of the Smith open flame oil burning curing system as compared with the furnace and flue wood burning system? A. I have observed that the tobacco cured with Smith open flame oil burner is softer, more pliant, has more life in it, better texture and quality.

Q. What advantages, from the standpoint of the commercial value of the product, have you experienced in the open flame oil curing system as compared with the use of the wood furnace and flue system? A. Tobacco will bring a higher price per pound if it is softer and has more life in it, and without having the sponge or discoloration that often is there when cured with wood and wood fired tobacco flue furnaces.

Q. You mention, Mr. Adams, the discoloration and sponged condition of tobacco, what causes that result in the curing process? A. It happens usually when a person curing with wood leaves the barn for a while and the heat will drop.

Q. Then, as I understand it, it is caused by an uneven or fluctuating heat in the curing barn. A. Yes, sir.

Q. From your experience in curing tobacco with the furnace, flue wood burning system, is it practical to maintain an even heat during the curing process? A. It is hardly possible because when you put wood in the fire it will usually advance the heat 10 or 15 degrees and as the fire burns out it will drop back down 10 or 15 degrees.

Q. Do I understand that it is the rise and fall of the heat during the tobacco curing process to which you have just referred that produces the discoloration and sponge condition in the tobacco? A. Yes, sir.

Q. Is it, or not, an advantage in the curing of tobacco to maintain a uniform sustained heat in the curing barn? A. Yes, sir, it is important to have uniform heat all the time; also it is important that the heat be uniform all over the barn, as is possible when using the Smith open flame type curer.

Q. Then, as I understand it, through the use of the Smith open flame oil burning system you can maintain uniform, sustained heat during the curing process? A. Yes, sir. You can keep it uniform all the way through; and another advantage is that you can cure the entire barn of tobacco without maintaining a heat any higher than 160 to 175 degrees; whereas, when curing with the wood furnace systems the heat quite often goes up as high as 190 to 200 degrees, thereby this excessive heat will redden the tobacco and lower the market value.

Q. Mr. Adams, is there any advantage in the use of the Smith open flame oil burning system over the use of the furnace and flue system from the standpoint of labor saving? A. Yes, sir. A person can save around $16.00 on labor per barn; and in an ordinary crop of tobacco will have about six barns; this making a saving of about $90.00 in a three acre crop.

Q. Did you ever hear of either the Reynolds or Brock oil burning curing systems? A. No, sir.

Q. Mr. Adams, from your experience in using both the furnace flue wood burning system and the system of open flame oil burning in curing tobacco, which has the least fire hazard? A. The Smith system I would say about 100% less fire hazard, and you can cure three barns in two weeks; and whereas the wood fired furnace will cure only two barns in two weeks.

Q. Bringing your attention back for a moment to the fire hazard, what is your explanation for the difference between the two systems from the standpoint of fire hazard? A. The Smith open flame curer is safer because there are many individual units in the barn, and each unit does not have to get so awful hot, they never get red hot, as is the case with flues in the wood burning furnace curer. If a leaf or stick of tobacco falls on the Smith units it will not catch fire.

Q. Mr. Adams, when you refer to the unit, do you or do you not refer to the baffle plate of each unit. A. Yes, sir. I refer to the baffle plate. You do not have the hazard of furnaces cracking and flues getting hot.

Respectfully submitted,

J. M. Adams.

Sworn to and subscribed before me,
this 12th day of February, 1947.

Mollie V. Hart,
Notary Public.
My commission expires July 4, 1947.
(Seal)

S. B. Mercer, being first duly sworn, deposes and says:

DIRECT EXAMINATION

Q. Give your name, age, post office address and the county of your residence, please. A. S. B. Mercer, West Nash Street, Wilson, North Carolina; age 57 years, and I live in Wilson County, of course.

Q. In what business are you engaged Mr. Mercer? A. Farming, a little.

Q. Do you produce tobacco? A. Yes, sir.

Q. What type of curer was being used in the curing of tobacco when you began to work in it and to produce it? A. Old-fashioned wood curers, flues and furnaces; been farming all my life.

Q. Have you used the Smith open flame oil burner curer? A. Yes, sir.

Q. When did you begin to use it? A. I reckon about 1938, 1936 or 1938, was the first Smith burner I had.

Q. Had you owned or undertaken to operate an oil burning tobacco curer before you purchased the Smith open flame curer? A. Yes, sir, I have used the Reynolds.

Q. When did you purchase and undertake to use the Reynolds curer? A. It was 1923, I think. That was one of the first I ever heard tell of, the Reynolds curer.

Q. Will you describe to us, please, the Reynolds curer? A. It was just one burner right in the center of the barn, and it went in on about something like a quarter of an inch pipe; that had a coil right under the burner that heated the kerosene which was used as fuel for the burner. The burner was about 12 inches in diameter, of cylinder type, and was placed under a large baffle plate approximately 10 feet square, built in four sections, fastened together with hinges so as to permit each section to be folded. The sections were of galvanized sheet iron and were supported by metallic rods which held the baffle plate in position with the central part about 18 inches above the ground and the outer edges about three feet above the ground. The burner was made of some type of metal. The fuel was conducted to the burner through pipes extending from a pressure tank located outside the barn. The pressure in the tank was produced through the use of an ordinary air pump, the type commonly used at that time in inflating bicycle tires. It was necessary to have two tanks in order to keep one in reserve while the other was in use. It was known as the Reynolds curer.

Q. Describe, if you will please, the result of your effort to use the Reynolds burner? A. Well, one thing it was taking too much oil, rather expensive, the best I remember it took about 200 gallons to the barn or a little over. I had it in a large barn; there was right much work to keep the tanks pumped up, about every eight or ten hours the jets got stopped up and we would have to cut the head off, put in some new jets; we had extra jets, but they would stop up too about every eight hours.

Q. Did the burner consist of more than one jet? A. No, sir.

Q. State whether or not you were able to successfully use the burner in curing green tobacco as a substitute for the furnace and flue system of curing tobacco. A. Well, no, I took it out and put the furnaces back and cured with wood; but I did cure three barns with the Reynolds, but it was pretty expensive.

Q. Do I understand you, Mr. Mercer, to be saying that you experimented with the curer in your effort to operate it satisfactorily through three curings? A. That is right.

Q. What was the effect of your effort to cure tobacco upon the tobacco? A. Every time I would let the heat go down the sap would go back in the tobacco and would damage the tobacco and I didn't get as good cure as I would with wood.

Q. State whether or not, in your opinion, Mr. Mercer, the commercial value of the tobacco you undertook to cure in the barn with the Reynolds curer was less than if you had cured it in a barn equipped with the ordinary flue and furnace system? A. I should say it was 25% damaged.

Q. You mean that it was worth 25% less? A. That is right, yes, sir.

Q. Mr. Mercer, to your knowledge, has anyone been able to successfully cure tobacco with the Reynolds curer such as you have described? A. Not as I ever heard tell of. Never have seen any more of them after that year.

Q. Between the time you undertook to cure tobacco with the use of the Reynolds curer and the time you purchased the Smith curer, was there any other open flame oil burning tobacco curer being manufactured and used in the curing of tobacco that you know or heard about? A. No, I didn't; I think the Smith open flame was the next I heard tell of in that section or anywhere.

Q. Mr. Mercer, will you state whether or not there is any difference between the quality of tobacco cured through the use of the Smith open flame oil burning system as compared with the furnace and flue system which was being used when you first began to produce tobacco? A. Yes, I think it cures better tobacco, has better texture and better color and weighs more.

Q. State whether or not, Mr. Mercer, there is an advantage in curing tobacco to maintain in the curing barn a uniform and sustained heat? A. Yes, sir, naturally there is an advantage to run steady heat; the heat going up and down will cause the tobacco to circle, sponge and different things after it gets yellow.

Q. Is the quality of the tobacco cured through the use of the Smith open burner tobacco curing system any different from that cured with the ordinary furnace and flue system? A. Yes, sir.

Q. What is the difference? A. It is a better type of tobacco, cures it more smoothly and more even than if you had let the heat go up and down curing with wood; makes better tobacco and it sells better.

Q. When you say it sells better, you mean that it sells for more money? A. Yes, sir, that is right.

Respectfully submitted,

S. B. Mercer.

Sworn to and subscribed before me,
this February 12, 1947.

Mollie V. Hart,
Notary Public.
My commission expires July 4, 1947.
(Seal)

United States Court of Appeals
for the District of Columbia

FILED DEC 10 1947

Joseph W. Stewart
CLERK

BRIEF FOR APPELLEE

United States Court of Appeals

DISTRICT OF COLUMBIA

Appeal No. 9660

Forrest H. Smith, appellant
v.
Lawrence C. Kingsland, Commissioner of Patents,
appellee

APPEAL FROM THE JUDGMENT OF THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF COLUMBIA

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Of Counsel.

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United States Court of Appeals

DISTRICT OF COLUMBIA

APPEAL NO. 9660

FORREST H. SMITH, APPELLANT

v.

LAWRENCE C. KINGSLAND, COMMISSIONER OF PATENTS, APPELLEE

APPEAL FROM THE JUDGMENT OF THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF COLUMBIA

BRIEF FOR THE COMMISSIONER OF PATENTS

INTRODUCTION

This is an appeal from the judgment (App. 6) of the District Court of the United States for the District of Columbia, dismissing appellant's complaint (App. 9–11) against the Commissioner of Patents in an action under Section 4915 R. S. (U. S. C., title 35, sec. 63), Civil Action No. 31868, in which appellant sought to have the District Court authorize the issuance of a patent containing certain claims (App. 9, 10) for an alleged invention in Drying Houses for Tobacco.

APPELLANT'S APPLICATION

The specification of the application here involved (App. 1 to 8) describes an apparatus for and a method of curing tobacco. Appellant's structure as described and illustrated is a curing barn or house equipped with a plurality of oil burning heaters arranged about the floor of the barn in a manner to provide a substantially uniform temperature throughout the cross sectional area thereof, each of the heaters being provided with an overlying baffle for deflecting the products of combustion laterally into the atmosphere of the barn, and each burner being provided with valve means for independently regulating the rate of combustion of the fuel supplied thereto. Finding of Fact No. 5 (App. 14) describes the alleged invention.

THE REFERENCES

The various references are described individually in the Findings of Fact, Nos. 6 to 9, inclusive (App. 14, 15). These references show it to be old to use oil burners in a tobacco barn for curing tobacco and to provide a baffle over the burner or burners for deflecting the products of combustion into the atmosphere of the barn, with valve means for controlling the fuel supplied to the burners.

THE CLAIMS

The appealed claims are three in number, appearing on pages 9 and 10 of the Appendix to Appellant's Brief. Two of the claims (1 and 3) are in apparatus form, while the third claim (2) is in method form. Finding of Fact No. 5 (App. 14) states that method claim 2 is essentially for the operation of the structure described in appellant's application.

SUMMARY OF ARGUMENT

1. The claims at bar define nothing inventive or patentable over what has already been patented to appellant in patent 2,051,348 (App. 73 to 81), since there is no line of patentable difference between claim 2 of the patent and the claims on appeal.

2. The claims at bar define nothing inventive or patentable over the disclosure of any one of the patents to Brock, Mims or Reynolds (App. 84 to 97).

3. Method claim 2 is barred by the prohibition of Section 4886 R. S. (U. S. C., title 35, sec. 31) since the evidence shows that the method was in public use more than two years prior to the first presentation by appellant of a method claim or the first assertion that appellant considered the method to be inventive.

ARGUMENT

1. Double patenting

Appellant's application here in suit was filed on November 2, 1942, as a continuation of an application filed on July 26, 1938. The disclosures of the two applications were identical, and two of the claims at bar (claim 1 and 3) are identical with claims sought in the earlier application (Findings of Fact, Nos. 2, 4—App. 13).

Appellant's patent 2,051,348, which forms the basis for the double patenting rejection, was granted on August 18, 1936, on an application filed July 12, 1930, and claim 2 of that patent has been held to be for the same invention as the claims at bar (Finding of Fact No. 10—App. 15).

Claim 2 of appellant's patent 2,051,348 (App. 81) defines the same combination and relation of burners, deflecting baffles and oil supply means and control as is set forth in apparatus claims 1 and 3 at bar. However, the claim does include a limitation to a screen interposed between the baffle means and the articles being treated, which screen is not disclosed or claimed in the application at bar. Accordingly, the claims at bar are broader in scope than patent claim 2. Appellant concedes this fact (Br. 11).

Appellant urges that though the claims here in issue could have been presented in the original patent and are broad enough to read on the form of the invention specifically disclosed in the granted patent, the rule is that an inventor who presents two separate modifications of his invention in two separate copending applications may present claims of a scope to be generic to both modifications in either the first or the second patent to issue (Br. 11).

Copendency between the patent and the application here in suit is said to result from the fact that a disclosure identical with the application here in suit was first presented to the Patent Office on September 20, 1935, prior to the granting of appellant's patent 2,051,348, which disclosure was·continued in the application filed on July 26, 1938, and finally continued in the application here in suit (Br. 10).

As indicated above, the apparatus claims at bar are broader than claim 2 of appellant's patent. These claims were not presented in the application filed in 1935, but were first presented to the Patent Office in the application filed in 1938, almost two years after the publication of appellant's patent 2,051,348, which admittedly contains a disclosure to support them. In other words, the first application in which the claims at bar could have been made was that filed in 1930, and it was not until 1938 that appellant thought of laying claim to the broad subject matter defined in these claims.

It is basic in patent law that only one valid patent can be granted to an inventor on one invention. No later patent can be issued for an invention actually covered by an earlier patent to the same patentee, even though the terms of the claims in the two patents may differ, and the later patent contain the broader claims. *Mosler Safe Co.* v. *Mosler,* 127 U. S. 355, *McCreary* v. *Pennsylvania Canal Co.,* 141 U. S. 467. This basic rule is applicable also in those situations in which the claims in the second patent or application, though different, are noninventively different from the claims of the first patent. *Miller et al.,* v. *Eagle Mfg. Co.,* 151 U. S. 186; *Kistler* v. *Coe,* 79 App. D. C. 36, 142 F. (2d) 94. As announced by the Circuit Court of Appeals, 3d Circuit, in *Lion Fastener, Inc.* v. *Hookless Fastener Co.,* 72 F. (2d) 985, 23 USPQ 1; the rule was stated to be, as shown by the syllabus, that

> Second of two patents granted same person is invalid for double patenting, unless inventions covered thereby are clearly separate and distinctly different and independent from those covered by first patent; mere distinction in breadth or scope of claims being insufficient.

Though it is true that claim 2 of appellant's patent is of narrower scope and is different from the apparatus claims at bar by virtue of the limitation therein to a screen interposed between the baffles and the tobacco being dried, that difference has been held by both the tribunals of the Patent Office and the Court below to be a noninventive one (Finding of Fact No. 10—App. 15). All that is alleged to be inventive in character in the apparatus defined in the claims at bar was disclosed in appellant's first application filed in 1930, and is included in claim 2 of the patent granted on that application in 1936, patent 2,051,348. Under the doctrine of the cases referred to in the preceding paragraph, these broader claims, directed to essentially the same invention, would be invalid if they appeared in a second patent; therefore, they are unallowable in this application.

Furthermore, it is submitted that the rule of law referred to above is particularly applicable to those situations where, as here, the broad claims are presented to the Patent Office for the first time long after a patent disclosing their subject matter has been published. *In re Carrier,* 55 App. D. C. 400; *Union Typewriter Co.* v. *L. C. Smith & Bros.,* 181 F. R. 966; *Gladding McBean Corp.* v. *N. Clarke & Sons,* 16 F. 2d 50; *Directo Plate Corp.* v. *Donaldson Lith. Co.,* 51 F. 2d 199; *Ely Norris Safe Co.* v. *Mosler Safe Co.,* 62 F. 2d 524.

Appellant urges that the effective date of the application here at bar is September 20, 1935, the filing date of application Serial No. 41465 (Plaintiff's Exhibit 3), on the ground that, as he says, it is immaterial whether or not the claims at bar were presented at the time of the original filing of the application, citing *Chapman* v. *Wintroath,* 252 U. S. 126 in support thereof (Br. 10).

However, it is submitted that the rule of *Chapman* v. *Wintroath* relates to divisional applications and to applications wherein different inventions are disclosed, and not to situations wherein the later application is directed to essentially the same invention as the patent, and the claims differ in scope only.

It is an undisputed fact that the claims at bar were presented for the first time in the application, Exhibit 2, filed on July 26, 1938. Also, it is an undisputed fact that the subject matter of these claims was published in 1936 when patent 2,051,348 was granted. It is submitted that under circumstances such as these that this Court in the *Carrier* case, *supra,* and the Third Circuit Court of Appeals in the *Union Typewriter* case, *supra,* held broad claims unallowable and invalid, respectively.

In the *Carrier* case, *supra,* the broad dominating claims were presented to the Patent Office for the first time eleven years after the publication of a patent of the same party disclosing their subject matter; while in the *Union Typewriter* case, *supra,* the broad claims were presented just four months after the first patent was published. In the present case, the broad claims were first presented almost two years after the publication of appellant's patent 2,051,348. Accordingly, it is submitted that the authorities cited fully support the ruling below that the broad subject matter of the claims at bar is unallowable to appellant in the application involved herein, and that the allowance of the claims at this late date would be bad for double patenting and would unlawfully and illegally extend the monopoly of appellant's patent 2,051,348.

It is urged in appellant's brief that there can be no double patenting of a method claim unless the earlier granted patent contains a similar method claim (Br. 14), and therefore, it is contended that the holding of double patenting as respects method claim 2 is improper (Br. 13).

In connection with this contention, it is submitted that the method and apparatus are and have been considered to be for the same invention, and that the method defined in claim 2 is essentially for the operation of the structure described (Finding of Fact No. 5—App. 14). Accordingly, whether the prior patent contains method claims is wholly immaterial. Moreover, essentially the same contention was raised by the appellant in *Kistler* v. *Coe, supra,* where the patent contained composition claims and claims to a structure and method of making the structure were being sought. Furthermore, the Ninth Circuit Court of Appeals in *Gladding-McBean Corp.* v. *Clarke, supra,* had before it the identical situation presented here, and there held the later method claims bad for double patenting over a prior apparatus patent. Accordingly, it is submittted that this contention of appellant is without merit.

It is desired to direct attention to a statement in the second paragraph of page 12 of appellant's brief, which does not accurately state appellee's position. Appellee has contended throughout that appellant is not entitled to claims in this application at this late date which differ in scope only from the patented claims, where all that is inventive, in both application and patent, is covered by the patent claims.

2. Noninventiveness over prior art

The lower Court found as a fact (Finding of Fact No. 11—App. 15) that none of the claims at bar recites anything amounting to an invention over any one of the patents to Brock, Mims and Reynolds (App. 82 to 97).

In connection with these prior disclosures appellant concedes that these patents disclose apparatus for drying tobacco by means of combustion gases from an open flame oil burner. (Br. 14.) But it is contended that what appellant did, which it is alleged amounts to invention, is to use low intensity burners distributed around the barn floor, each with provisions for diluting the gases to reduce the combustion temperature to a point where the immediately adjacent tobacco would not be overheated. (Br. 2.)

Aside from the fact that the application and claims at bar contain no reference to burners provided with means for diluting and cooling the combustion gases, it is believed that appellant essentially concedes that both Mims and Reynolds fail of being anticipations only because they do not disclose a plurality of low-intensity oil burning heaters distributed over the barn floor. (Br. 14, 15.)

It is believed to be a matter of general information and knowledge that an increase in the number of heaters or heat radiating surfaces and the uniform distribution thereof around a room or area it is desired to heat will tend to produce a more uniform and constant temperature within the room or area than one without such number and distribution. Appellant's witness admitted as much. (App. 31.) In addition, the same witness testified that even with the old flue system, the object in distributing the flues around the barn was to get a more uniform heat distribution. (App. 30.) Therefore, the sole distinction over these prior patents must lie in the use of a plurality of low-intensity burners.

The use of a plurality of low-intensity burners for the single low-intensity burner of the references falls within the realm of mechanical skill and is not invention. It is a mere duplication of parts, and this has been uniformly held to be not patentable. *Dunbar* v. *Myers,* 94 U. S. 187; *In re Scott,* 25 App. D. C. 307; *In re Volkmann,* 28 App. D. C. 441.

Although appellant urges that the evidence shows that the Reynolds curer was tried by the art and found wanting (Br. 14), it is submitted that the record shows (App. 70) that the witness stated unequivocally that he "did cure three barns with the Reynolds, but it was pretty expensive." Expense, rather than inoperability, was the deciding factor.

With respect to the Brock patent, appellant urges only that this reference fails to show means for so distributing the heat of the burner so as to obtain uniform temperatures throughout the entire barn.

(Br. 15.) Though Brock clearly discloses a plurality of individual burners for providing a uniform temperature in the area of the barn occupied by the tobacco to be cured (Finding of Fact No. 6—App. 14), the sole claim of invention over this patent appears to rest upon the witness' conclusion that the Brock apparatus would not work (Br. 15, last three lines). As the record shows, the witness admitted never having operated or seen the Brock apparatus in operation (App. 27). It is submitted that if the Brock apparatus failed to accomplish its stated purpose to the complete satisfaction of the individual user, the distribution of the individual heaters and baffles therefor around the floor of the drying house in order to obtain uniformity of heating would be obvious and within the skill of the art. Also, since Brock indicates and suggests that burners other than those specifically described could be utilized in his apparatus (App. 84, lines 65–75), the use of the so called "low-intensity" burners in his device would not be invention. Such use is not only foreshadowed by the suggestion in Brock, but it involves only the application of common sense and good engineering practice, once it is admitted, as appellant has that the desirability of using oil was obvious (Br. 6, last line) and that it would be obvious to use oil burners for the old wood burning flue curing systems (Br. 7). Accordingly, it is submitted that the alleged novel feature of the claims at bar falls within the realm of one skilled in the art and does not rise to the dignity of invention. Though appellant's device may be an improvement over the prior art devices, all improvement is not invention and entitled to protection as such. *Minnesota Mining & Mfg. Co.* v. *Coe,* 69 App. D. C. 217, 99 F. 2d 986.

Appellant in his brief urges that invention is present because appellant's device had gone into extensive use, satisfied a long existing need in the art, and marked a real advance in the art of curing tobacco (Br. 7, 17).

Commercial success cannot supply inventive genius to a device that has none. *Tropic Aire* v. *Sears, Roebuck & Co.,* 44 F. 2d 580, cert. denied 282 U. S. 904. Only when the question of invention is in doubt have the courts permitted the questions of utility and commercial success to be determining factors. Then, and only then, can commercial success be said to be indicative of invention. *Paramount Publix Corp.* v. *American Tri-Ergon Corp.,* 294 U. S. 464; *Conover* v. *Coe,* 69 App. D. C. 144; 99 F. 2d 377; *Minnesota Mining & Mfg. Co.* v. *Coe, supra.* But, it must be noted that even though utility and commercial success be present and conceded, they are not sufficient in themselves to justify the issuance of a patent. *Morrison* v. *Coe,* 74 App. D. C. 335; *Rembert* v. *Coe,* 78 App. D. C. 50; *Union Metal* v. *Oomes,* 154 F. 2d 857.

3. Public use of method

The evidence produced at the trial shows that appellant first used the open flame oil burning curers in 1934, and that in that year, in 1935 and in 1936, many were manufactured and sold (App. 35). Also, the deposition of the party Kornegay (App. 38) states that he first saw an oil burning tobacco curing unit in 1934 or 1935, that he purchased such a unit in 1934, and has been using it for eleven or twelve years. That unit was identified as one like that of Smith patent 2,051,348. (App. 73–81.)

This evidence clearly establishes that the method defined in claim 2, which is essentially no more than the operation of the structure described (Finding of Fact No. 5—App. 14), had been in public use more than two years prior to the first claiming by appellant that the method involved invention. The method claim was presented for the first time in July 1938 in application Serial No. 221,288 (Exhibit 2). Under Section 4886 R. S. (U. S. C., title 35, sec. 31), a patent claiming such method is barred by the admitted public use more than two years prior to the filing of the application claiming the method. This is true despite the fact that appellant could have made the process claims in the 1935 application, Serial No. 41,465 (Exhibit 3). When the process claim was first presented is the critical factor under the statutory provision, as has been clearly held in *Model Bottling Mch. Co.* v. *Anheuser-Busch Brew. Assn.,* 195 F. R. 573; *Westinghouse Electric & Mfg. Co.* v. *Jeffrey De Witt Insulator Co.,* 22 F. 2d 277. Accordingly, the record showing a definite public use of the method more than two years prior to the claiming thereof, claim 2 is unpatentable to appellant at this time and in the application involved herein because of the prohibition of Section 4886 R. S.

CONCLUSION

It is respectfully submitted that the claims at bar were properly held to be unpatentable over the prior art, that the claims at bar are for the same invention as claim 2 of appellant's patent 2,051,348, and that the method defined in appealed claim 2 is unallowable under Section 4886 R. S.

Respectfully submitted.

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December 1947.

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IN THE

UNITED STATES COURT OF APPEALS

FOR THE DISTRICT OF COLUMBIA

No. 9660

FORREST H. SMITH,

Appellant,

vs.

LAWRENCE C. KINGSLAND, COMMISSIONER OF PATENTS,

Appellee.

United States Court of Appeals
for the District of Columbia
FILED MAR 1 5 1948
Joseph W. Stewart
CLERK

REPLY BRIEF

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Dated: New York, N. Y., March 8, 1948.

In the

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Appellant,
vs.
Lawrence C. Kingsland, Commissioner of Patents,
Appellee.

REPLY BRIEF

The appellee in his brief discusses the two grounds of rejection on which the lower court found against appellant and to which our main brief is directed. The appellee also urges a third ground of rejection with respect to the method claim (claim 2), namely, public use. This ground of rejection was urged before the lower court and a proposed finding of public use was submitted to the court but was not included in the court's findings. We will, however, reply briefly on this point.

Double Patenting

In his argument on this point the appellee assumes a relation between the granted patent and the application here at bar which does not exist, and then cites many cases to support his contention that this fictitious relation results in double patenting. With such of the appellee's citations as state the rule of "double patenting" we are in full accord. A valid patent cannot issue to an applicant for the invention claimed in a patent previously issued to him, and it makes no difference whether the prior patent was issued one week or ten years before the issuance of the later patent. The appellee in his brief confuses the issue of "double patenting" with the question of delay in presenting the claims whose allowance is sought. On this second and totally independent question the Supreme Court in *Chapman* v. *Wintroath*, 252 U. S. 126, explicitly ruled that failure to present the claims for which a second patent was sought during the pendency of the application of the first patent and for a period of two years after the grant of the first patent, did not constitute a valid ground of rejection.

We did not quote *Chapman* v. *Wintroath* on this point in our main brief, for although this alleged undue delay in filing the claims here in issue was urged before the lower court and a finding proposed that such delay barred the grant of the claims, that finding was not adopted by the court.

The appellee has cited no case of the Supreme Court modifying in the least the above stated rule, and in the case of this court upon which appellee relies in support of his argument on the grounds of delay in presenting the claims at bar, viz., *In re Carrier,* 55 App. D. C. 400, the delay in filing was eleven years (appellee's brief, p. 17).

The sole question to determine in deciding whether or not the claims of this application will be void for "double patenting" is—Are they directed to the same invention as the claims of the granted patent? The lower court has held against appellant on the point, but it seems to us conclusive that if the manufacture and sale of the specific device shown and described in this application would not infringe the claims of the granted patent, those claims cannot be directed to the same invention as the claims of this application which are necessarily based on that structure.

It seems equally conclusive that if it be held that the claims here presented would be invalid for "double patenting" it must also be held that the claims of the granted patent are infringed by the structures disclosed in this application.

Claim 2 is the broadest claim in the granted patent. It specifically includes an element not disclosed in the application, namely, "a screen interposed between the baffle means and the article". This screen has nothing to do with the generation and distribution of heat as required for carrying out the applicant's novel method of curing tobacco, but is provided as an additional protection against fire hazard to prevent a falling leaf of tobacco from contacting the baffle directly overlying the flame. If this screen be regarded as a non-essential element such that an apparatus without the screen but otherwise containing the structure recited in claim 2, constitutes an infringement of claim 2, then it might be said that the claims of this application are directed to the same invention as that claimed in the granted patent. On the other hand, if it be held that, because of the inclusion of this element in the claim, an apparatus from which the screen is omitted would not infringe the claim, then the claim is obviously for a combination different from that recited in the claims here at bar.

Delay in Presenting the Appealed Claims

We believe the ruling in *Chapman* v. *Wintroath, supra,* conclusively affirms the right of a patentee to present in a second application, filed prior to the grant of his patent, any claim based on the disclosure common to the patent and application and obtain for such claim the benefit of the earlier filing date, provided the claim is presented within two years after the grant of the first patent disclosing the invention. No other construction can be placed on this ruling without doing violence to the English language and ignoring the reasoning of the court. The grant of a patent dedicates to the public all that is disclosed but not claimed *provided* the applicant has not forestalled that dedication by filing a second application disclosing the subject-matter not claimed in the granted patent.

Prior to its decision in *Chapman* v. *Wintroath* the Supreme Court had made no ruling at all on the time allowed for an applicant to present claims to a structure disclosed in a previously granted patent and until shortly prior to that decision it had been the accepted practice of the Patent Office to permit an applicant to present new claims at any time provided the original application was copending with the application of the granted patent. This court in *Rountree* v. *Sloan,* 45 App. D. C. 207, for the first time placed a time limit on the period in which an applicant might present claims to the structure disclosed in a granted patent. The time stated in that case was one year from the grant of the patent. Following that decision this court applied its one-year rule to the appellant in *Chapman* v. *Wintroath,* where the delay was nearly two years. That decision of this court, 47 App. D. C. 428, was reviewed by the Supreme Court and reversed, the Supreme Court specifically holding that, by analogy to the rule in reissue cases, the permissible delay should be two years and not one year as held by this court. The analogy is close. By the reissue statutes a patentee may recapture what otherwise is dedicated to the public, by a reissue application filed within two years of the grant of his patent. So an applicant who has filed his second application before the grant of his patent should be allowed at least a similar period to present claims to the common subject-matter disclosed in the granted patent.

The Prior Art

The appellee's argument on "no invention over the prior art" is what might be expected from the standpoint of "wisdom after the event", but in some particulars it seems to us he has somewhat distorted the facts. For example, on page 10 appellee quotes from one of the witnesses who attempted to use the Reynolds curer. From the part of a sentence quoted it would be implied that the operation of the curer was satisfactory but was expensive to operate. The context (App. 71) makes it plain that the operation was not satisfactory and the tobacco was seriously damaged.

The statement, also on page 10, of appellee's brief, that the applicant merely substituted a plurality of low-intensity burners for a single low-intensity burner, is misleading. If the single burner of the prior art was a "low-intensity" burner as that term must be here construed, there would not be enough heat supplied to cure the tobacco in the barn. The intensity of a burner is a measure of the rate of heat generation. It takes the same rate of heat generation to cure the tobacco whether it be generated by a single burner or twenty, and a burner which generated all the heat required for the curing has an intensity of a different order from one which generates only one-twentieth of that heat. The appellee's contention that the applicant's invention is a "duplication" of the prior art curers is not supported by the facts.

The problem which confronted the applicant appears simple only if the requirements for properly curing tobacco be ignored. To get the best results—and corresponding prices—the whole barn full of green tobacco must first be uniformly heated at a comparatively low temperature, 80° F. (App. 20, 31). Heat must be furnished, but at a uniform low temperature. In the final stage of the curing the temperature is raised to 175° F. and it must still be uniform throughout the barn. 175° represents a temperature rise five times as great as 80° (assuming an outside temperature of 45°) and it was by no means obvious that both those conditions could be maintained from open flames burning in the barn directly under the tobacco without overheating the tobacco at the bottom in the final stage or insufficiently heating in the preliminary stage.

The temperature of combustion is 3000° F. (App. 27) and the combustion gases are initially at that temperature. When the burners are turned low the heat is generated at a temperature of 3000° F. but the quantity of oil burned and the quantity of heat generated is comparatively small, and quite obviously a comparatively small quantity of hot combustion gases will be sufficiently reduced in temperature by the comparatively large amount of surrounding air to properly cure the tobacco. When, however, the temperature is raised to 175° F. a very much larger quantity of heat must be produced—five or six times as much. This larger quantity of heat is in the form of a larger volume of combustion gases at 3000° F., and it was by no means obvious that this large volume of hot gases could in the small space between the floor of the barn and the tobacco be so reduced in temperature as not to injure the immediately overhanging tobacco.

The old flue system presents no such problem. The air in the barn is heated indirectly from the hot metal surfaces of the flues. Temperature changes are obtained by changing the temperature of the flues. With a low fire in the furnace for the initial drying the flues are not too hot to touch and at five times that temperature are still but a fraction of 3000°. If red hot, which they might be right at the furnace, the temperature would still be less than 1000° F. By the old flue system the temperature changes are obtained by varying the temperature of the heating surfaces. By the new system the temperature changes are obtained by varying the quantity of heat generated, and the experience of the witnesses with the Reynolds curer (App. 70, 71) demonstrated that something more than an oil burner with deflecting baffles is required.

Mims and Brock likewise show merely a central heater. Mims makes no attempt at heat distribution, and in Brock the baffles are arranged to concentrate the heat in the middle of the barn, instead of distributing it uniformly throughout the space beneath the tobacco. None of these devices solved the problem and the old flue system was universally used until the applicant's curing system was placed on the market where it met with immediate success. The language of the Supreme Court in the recent case of *Goodyear Tire & Rubber Co., Inc.* v. *Ray-O-Vac Co.,* 371 U. S. 275, 278, is particularly applicable to the facts presented here.

> "Viewed after the event, the means Anthony adopted seem simple and such as should have been obvious to those who worked in the field, but this is not enough to negative invention. During a period of half a century, in which the use of flash light batteries increased enormously, and the manufacturers of flash light cells were conscious of the defects in them, no one devised a method of curing such defects. Once the method was discovered it commended itself to the public as evidenced by marked commercial success. These factors were entitled to weight in determining whether the improvement amounted to invention and should, in a close case, tip the scales in favor of patentability".

The Method Claim

The appellee's contention that the method claim is open to rejection on the ground of public use is too far-fetched for serious consideration. The original application filed in 1935 was not included in the Appendix because it was agreed that the disclosure there presented was identical with the disclosures of the intermediate application and also the application here in suit. The applications having been continuously pending since the original filing in 1935, the situation is precisely the same as though this were the original application, and no amount of public use in 1934 can defeat a patent granted on an application having a filing date in 1935.

Respectfully submitted,

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Dated: New York, N. Y., March 8, 1948.